163

National Water Quality Network

ANNUAL COMPILATION OF DATA

October 1, 1960 - September 30, 1961

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U.S. DEP[illegible]N, AND WELFARE

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ANNUAL COMPILATION OF DATA

October 1, 1960–September 30, 1961

A Federal, State and local cooperative report on water quality determinations of surface waters at selected locations throughout the United States

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service, *Division of Water Supply and Pollution Control* • Washington 25, D.C.

RELATED PUBLICATIONS:

National Water Quality Network
Annual Compilation of Data, October 1, 1957–September 30, 1958
Public Health Service Publication No. 663 (1958 Edition)

National Water Quality Network
Statistical Summary of Selected Data, October 1, 1957–September 30, 1958
Public Health Service Publication No. 663—Supplement I

National Water Quality Network
Annual Compilation of Data, October 1, 1958–September 30, 1959
Public Health Service Publication No. 663 (1959 Edition)

National Water Quality Network
Annual Compilation of Data, October 1, 1959–September 30, 1960
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National Water Quality Network
Plankton Population Dynamics, July 1, 1959–June 30, 1961
Public Health Service Publication No. 663—Supplement 2

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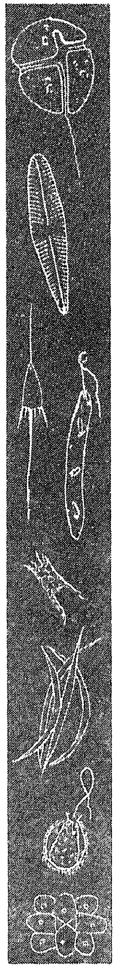
ACKNOWLEDGMENT

To increase the usefulness of the water quality data, annual compilations since 1958, including this one, have presented preliminary and unadjusted flow data for gauging stations at or near most of the National Water Quality Network sampling points. Final data may be obtained directly from the agency concerned. Any studies using the provisional flow data herein compiled should verify the data prior to completion of reports on such studies. For making the flow information available for this publication, grateful acknowledgment is made by the Public Health Service to:

The International Boundary and Water Commission, United States and Mexico

The U.S. Department of the Interior
Bureau of Reclamation • Geological Survey

The U.S. Department of the Army
Corps of Engineers • Lake Survey



FOREWORD

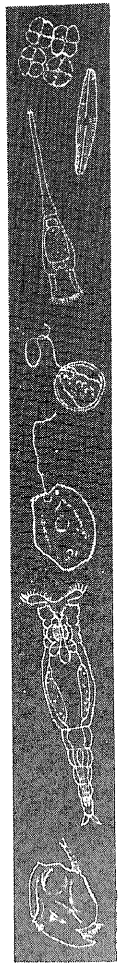
This is the fourth annual compilation of data from the National Water Quality Network of the Public Health Service. Again the data have revealed some very interesting findings which can be usefully applied to facilitate water quality evaluation.

As in each of the years the Network has functioned, an increasing number of State and other non-Federal agencies have taken an active interest in the field of water quality measurement. This is directly attributable to the mounting need for nationwide conservation of water resources. Our own Network was increased from 72 to 93 stations during this data year, and continual expansion is planned toward a goal of 300 stations.

The Public Health Service gratefully acknowledges the assistance to our Network of the many local, State, interstate, and Federal agencies concerned with water quality management. The success of this program depends, in large measure, upon their continued interest and support.

GORDON E. MCCALLUM, D. Sc.,
Assistant Surgeon General,
Chief, Division of Water Supply and Pollution Control

CONTENTS



ANALYTICAL AND FLOW DATA INDEX

STATION	Radioactivity Determinations	Plankton Populations	Organic Chemicals	Chemical, Physical and Bacteriological Analyses	Flow Data	Strontium 90	Trace Elements
	Page No.	*Page No.*	*Page No.*	*Page No.*	*Page No.*	*Page No.*	*Page No.*
Allegheny River							
at Pittsburgh, Pa.	27	28	29	30–31	32	535	541
Animas River							
at Cedar Hill, N. Mex.	33–34	35	36	37–38	39	535	541
Apalachicola River							
at Chattahoochee, Fla.	40	41	42	43	44	535	541
Arkansas River							
at Pendelton Ferry, Ark.	45	46	—	47	48	535	541
near Ponca City, Okla.	49	50	—	51–52	53	535	541
at Coolidge, Kans.	54	55	—	56–57	58	535	541
Big Sioux River							
below Sioux Falls, S. Dak.	59	60	—	61	62	535	541
Chattahoochee River							
at Columbus, Ga.	63	64	65	66–67	68	535	541
at Atlanta, Ga.	69	70	71	72–73	74	535	541
Colorado River							
at Yuma, Ariz.	75	76	77	78–79	80	535	541
above Parker Dam, Ariz-Calif.	81	82	83	84–85	86	535	541
near Boulder City, Nev.	87	88	89	90–91	92	535	541
at Page, Ariz.	93–94	95	96	97–98	99	535	541
at Loma, Colo.	100	101	102	103	104	535	541
Columbia River							
at Clatskanie, Oreg.	105–106	107	108	109–110	111	535	541
at Bonneville, Oreg.	112	113	114	115	116	535	541
at McNary Dam, Oreg.	117	118	119	—	120	535	541
at Pasco, Wash.	121–122	123	124	125–126	127	535	541
at Wenatchee, Wash.	128	129	130	131–132	133	535	541

Dash (—) indicates no determination made.

ANALYTICAL AND FLOW DATA INDEX—Continued

The National Water Quality Network

The Public Health Service program for providing fundamental information on the quality of the Nation's waters stems from Public Law 660, approved July 9, 1956, as amended by Public Law 87–88, July 20, 1961. Section 4(c) thereof states: ". . . the Secretary (of Health, Education, and Welfare) shall in cooperation with other Federal, State, and local agencies having related responsibilities, collect and disseminate basic data on chemical, physical, and biological water quality insofar as such data or other information relate to water pollution and the prevention and control thereof."

To fulfill this responsibility, the National Water Quality Network collects, interprets, and disseminates:

a. Information on changes in water quality at key points in river systems, as such quality may be affected by changes in water use and development.

b. Continuous information on the nature and extent of pollutants affecting water quality.

c. Data which will be useful in the development of comprehensive water resources programs.

d. Data which will assist State, interstate, and other agencies in their water pollution control programs, and in the selection of sites for legitimate water uses.

Some 50 sampling stations were established when the program started, October 1, 1957. By September 30, 1961, the number had grown to 93.

Each sampling location satisfies one or more of the following criteria:

a. Major waterways used for public water supply, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other legitimate uses.

b. Interstate, coastal, and international boundary waters.

c. Waters on which activities of the Federal Government may have an impact.

Sampling station sites are fixed only after consultation with local, State, Federal and other agencies having related interests.

Active local participation is important in this operation. It assures maximum development of all information valuable both locally and nationally. Program costs are shared by the Federal Government and state and local agencies, those of the latter through contributions of laboratory and sampling manpower. Specifically, the State and local agencies perform certain of the conventional chemical analyses and collect samples for the newer, more complex examinations. The Public Health Service, in turn, performs the more complex determinations and makes the results available to the participants and to the public. In addition, the consultation, training facilities, and other resources of the Public Health Service are available to the cooperating agencies.

Locations of sampling stations in operation as of September 30, 1961 are shown on page 12. Descriptions of the stations, participating agencies, and other pertinent information are presented on pages 13 through 20.

Only after careful screening of needs in water resource development was a pattern set for analyses of water samples.

All Network samples are examined for:

a. Radioactivity.
   (1) Gross alpha.
   (2) Gross beta.
   (3) Strontium 90.

b. Plankton populations.

c. Coliform organisms.

d. Organic chemicals.

e. Biochemical, chemical, and physical measurements, including biochemical oxygen demand (BOD), dissolved oxygen (DO), chemical oxygen demand (COD), chlorine demand, ammonia nitrogen, hydrogen ion concentration (pH), color turbidity, temperature, alkalinity (or acidity), hardness, chloride, sulfate, phosphates and total dissolved solids.

f. Sodium, potassium, boron, selenium and trace elements.

Samples for groups c and e, above, were collected and analyzed weekly. Samples for organic chemicals were collected and analyzed monthly and plankton organism examinations were conducted semimonthly. Water samples for analysis of suspended and dissolved alpha and beta radioactivity were submitted every second week during the first eleven months of the 1960–61 water year from those stations at which counts were close to background. Samples were submitted weekly from all new stations and from those stations at which counts were significantly above background. During the month of September, 1961 samples were collected weekly at all stations. Strontium 90 analyses were made on composites of samples accumulated over 3-month periods, except where indicated otherwise. Generally, one-fourth of the stations were scheduled for this determination during each 3-month period. The stations were selected so that at least one analysis was obtained for each river basin during each quarter, with at least one analysis at each station during the water year. Sodium, potassium, boron, selenium and trace metals were determined on 4-month composites of weekly samples. New parameters which are developed and found significant will be included as the program continues.

Analytical Methods and Reliability of Data

The physical, chemical, and biochemical data included in this publication are the result of cooperative efforts of the agencies listed in column 6, pages 13–20. In general, most of these measurements were contributed by their laboratories. While it is recognized that individual laboratories make minor modifications to meet local conditions, the methods used in most cases are those published in the 11th edition, "Standard Methods for the Examination of Water and Wastewater." For uniformity, the chlorine demand test is reported on the basis of the starch-iodide titration procedure, and the chemical oxygen demand test is restricted to the use of 0.025 N reagents.

To assure continued reliability in the published data, frequent analysis of reference samples by each cooperating laboratory constitutes an integral part of the overall program. Periodically a synthetic standard sample is provided to each participant for reference analysis. The reported results are reviewed. Any significant errors are called to the attention of the reporting laboratory and, after the cause of the errors has been determined, the previously submitted data are either corrected or discarded. From these findings, the analyses reported in this compilation are believed to be accurate to ± 10 percent of the reported values.

The analytical methods used by the Public Health Service laboratories are described in the discussion of water quality parameters which follows, and are covered by several of the references listed in the Bibliography.

Water Quality Parameters

In the assessment of water quality all of the legitimate purposes for which raw waters can be used, and which may be affected by pollution, must be considered. These may range from the minimum requirements necessary for navigation to the ultimate in water quality demanded for special industrial processing. Quality needs differ considerably, therefore, according to water use.

For domestic use, water must be free of disease organisms, clear, colorless, taste- and odor-free, and have a relatively low dissolved mineral content. Agricultural water is judged primarily on its mineral content, especially with respect to the ratio of sodium to other cations, and the presence of boron. Water for fish propagation and recreational purposes must be relatively free from domestic and industrial pollution and must be able to sustain an active flora of the smaller aquatic organisms on which fish and wildlife feed. Industrial water quality demands run the gamut from the complete absence of minerals to a requirement of low temperature, the critical factor in water used for cooling. The effects of radioactive materials on these uses have not yet been fully appraised.

The various laboratory examinations made as part of this program are discussed below.

Radioactivity

Radioactivity, long recognized as a contaminant of water from natural sources, has continued to grow in importance and health significance with the development of nuclear energy for both military and peaceful uses. Consequently, levels must be measured continually as new sources are established.

Gross alpha and beta measurements are made on both suspended and dissolved solids in the raw surface water samples. The total radioactivity in the dissolved solids provides a rough measure of the levels which may be found in a treated water, where water treatment removes substantially all of the suspended matter.

Alpha levels reflect largely the activity added by uranium and thorium daughters. Beta activity levels generally reflect the variable contamination resulting from fallout and discharges from nuclear energy installations, institutions utilizing radioactive materials, and other manmade sources.

Gross levels are most informative in evaluating long-term trends or changes in water quality. By themselves, however, they are of limited value in assessing radiation exposure. Where gross results are consistently over the maximum permissible concentrations for mixed fission products, the identity of the specific radionuclides involved must be established.

Because of its significance in the environment, the concentration of Strontium 90 in the total solids is also reported. The levels found were all low and considerably less than the limit (10 $\mu\mu c/1$) specified in the Public Health Service Drinking Water Standards (*22*, *23*). Decreases in Strontium 90 levels were observed at all stations of the National Water Quality Network with the exception of one Mississippi River station where very slight increases were observed. The period (1960–61 water year) may be used to establish a base line for Strontium 90 levels for the National Water Quality Network.

Populations of Plankton

Many aquatic organisms are sensitive to the various substances which enrich or pollute water. Some of these develop only in relatively clean water, while others may be stimulated to live and multiply in the presence of certain types of pollutants, especially household sewage and certain kinds of industrial wastes. On the other hand, excessive toxic substances may reduce or eradicate planktonic crops. Large populations of algae are sometimes induced to develop by mineralized products of sewage decomposition when nitrates and phosphates are made available as nutrients. Planktonic organisms are also important because of their ability to concentrate a wide variety of radionuclides. Impoundment of water by navigation or hydroelectric dams often increases the density of planktonic blooms.

The plankton data give the numbers, kinds and occurrences of algae and other aquatic microorganisms in the water. This information is useful in determining the pollutional status of any water resource, and in indicating the relative numbers of organisms which may cause problems in the treatment and use of water.

These organisms interfere with water use through shortening of filter runs in treatment plants, and by causing tastes, odors, coloration and various chemical and physical changes in the water environment. By regular and frequent reference to the plankton counts, it is possible to determine the procedures that will be required in treating the water for use.

In the stream or lake itself, many planktonic organisms are known to improve water quality by providing food and oxygen for desirable aquatic life and by aiding in the recovery of polluted water. They may form unsightly blooms, mats and slime growths; release toxic products which kill fish and other animals; and, upon dying and decomposing, exert a biochemical oxygen demand which uses up all oxygen in the water.

Domestic and industrial wastes influence the kinds and numbers (or diversity) of organisms. Hence, plankton may reflect changes in water quality resulting from changes in the wastes containing suspended and dissolved substances. In addition, each geologic area of the United States has a distinctive phytoplankton flora.

Relatively low phytoplankton counts ordinarily occur at sampling stations on the Great Lakes, the Columbia River, and on many rivers in the Southeast. Such stations as Ponca City, Okla., Peoria, Ill., and Minneapolis, Minn., show extremely high counts, but with lower species diversity. Waters receiving heavy organic waste loads at Winfield, W. Va., on the Kanawha River and on the upper Ohio River, however, show low plankton counts, probably resulting from toxic effects.

Data on plankton dynamics will be particularly useful in water quality evaluation when they have been recorded over a long period to indicate variations in kinds and numbers from month to month and from year to year.

Counting Procedures

The identification and enumeration procedures aim for maximum accuracy in the data reported. They strive to simplify and standardize methods of enumerating each of the many organisms observed. The volume of samples analyzed is relatively large, which tends to produce greater accuracy. Organisms are identified to genus or generic group; the diatoms are further identified to species.

Sampling is conducted semi-monthly. Each sample consists of three liters of raw water, collected directly from the stream or a treatment plant intake. The sample is preserved during shipment by adding 100 ml. of preservative solution (0.16 percent Thimerosal plus 1 percent Lugol's solution).

Phytoplankters are counted on the Sedgwick-Rafter slide. The analysis for nannoplankton is made by counting a 100-mm. strip on the Sedgwick-Rafter slide, using a 200× mag-

nification. The tiny centric and pennate diatoms (those not forming filaments or colonies) are identified from specially prepared hyrax slides using 900× magnification and apochromatic resolution.

Rotifers, crustacea and other microinvertebrates are enumerated under a compound microscope at 100× magnification. A raw liter sample is settled and the sediment, when necessary, is washed of colloidal material and tiny silt particles. These microinvertebrates are counted in a special slide measuring 80 x 50 x 2 mm. These animals are known to be heavy consumers of phytoplankton and organic detritus, and they are an important link in the food chain supporting fish populations.

Identification of diatom species and their proportional census is done from incinerated frustules of diatoms settled and washed from a liter of sample. The washed sediment containing the diatoms is dried on a warming table on a number one coverglass, and this sediment is ashed in place on the coverslip on a red-hot hotplate. This method does not appear to change the minute identification markings of the siliceous cell walls and enables the two valves (epitheca and hypotheca), as well as the groups of cells attached to one another to remain in a natural grouping, so that Sedgwick-Rafter counts and proportional counts can be matched. Chemical cleaning was abandoned because bubbling separated the valves and distorted natural cell grouping and tended to inflate the actual count. Permanent slide mounts are made with hyrax medium. The technique of settling, washing in distilled water and mounting does not appear to alter the uniformity of the diatom species composition. Proportional counts are made with 90-power oil immersion apochromatic objectives and 10-power oculars containing a Whipple micrometer grid. Random strip counts are made until the total number of units reaches two hundred to three hundred.

Proportional counting of diatoms from permanent slides is on a modified unit-area basis, in which each single cell or each portion of a natural aggregate occupying up to 300 square microns (μ^2) is tallied as one unit, cells or aggregates occupying from 300 to 1,000 μ^2 as two, those 1,000 to 2,500 μ^2 as three, those 2,500 to 5,000 μ^2 as four and those over 5,000 μ^2 as five. The Whipple grid makes this scaling simple. This system gives a slight weighting to the larger specimens and colonies, which are seldom numerically abundant, but it is basically the same as the Sedgwick-Rafter count used for enumerating the other phytoplankters. About 95 percent of the cells or clumps naturally fall into size class one or two.

Organic Chemicals

The Nation's water resources continue to receive increasing quantities of organic contaminants. Since 1940 the chemical industry, particularly in the manufacture of synthetic and petrochemicals, has experienced an enormous expansion that shows every sign of continuing. Each year millions of pounds of synthetic detergents, insecticides, herbicides, and similar domestic products find their way into our streams from household sewers, industrial waste discharges, and land runoff.

Effective and economical treatment methods for most of the complex organic materials remain to be developed. Even where treatment exists, residues may remain in sufficient quantity to cause water damage. These stable residues persist through sewage treatment, biological and chemical action of the stream, and water treatment processes, and finally reach the consumer in drinking water.

The presence of some of these materials, even at concentrations considerably less than 1 part per million, may impair water quality, most noticeably in production of tastes and odors. Fishflesh tainting, also quickly noticed by the consumer, is another damage. Effects on water treatment, many of which are ill-defined at present, and impairment of water quality for industrial uses are being reported with increasing frequency. Essentially nothing is known of the possible immediate or long-term effects of these materials on human health. Such information is urgently needed.

The usual sanitary analyses are not effective in measuring

these newer organic contaminants. Yet it is essential to know something of their concentrations and character. A method known as the "Carbon Adsorption Technique," developed by the Public Health Service, permits the concentration of these organic compounds from a large volume of water. Elution of the adsorbed materials with organic solvents, followed by chemical separation and testing, provides useful information concerning organic pollution and for assaying river systems for these substances.

Field studies, replicate samples taken simultaneously from the same source, and subsequent replicate analysis, indicate a reproducibility for a single source, of ± 10 percent. Moreover, experiments conducted in the laboratory with known solutions of organic substances indicate that adsorption efficiencies may approach 100 percent under carefully controlled conditions. However, data from many individual samples collected on different river systems strongly suggest that the adsorption efficiency may vary because of differences in the adsorbability of the particular substances present at a sampling site. The results of desorption efficiency tests run in the laboratory range from 50 to 90 percent. Therefore, comparison of results on a quantitative basis should be approached with caution.

Following continuous flow of about 5,000 gallons of water through the carbon adsorption column over a 7- to 10-day period, material on the carbon adsorption column is extracted with two solvents, chloroform and alcohol.

The extracts are weighed, and the concentration of these materials in the water sampled is then computed. Results are recorded in parts per billion (micrograms per liter). Clean waters may contain 20 to 50 ppb. of chloroform extractables and 50 to 100 ppb. of alcohol extractables. Polluted waters contain several times these concentrations.

Chloroform Extracts

The organic residue recovered from the carbon adsorption column by chloroform is very complex. It is desirable to separate the crude extract into certain broad chemical classes, and this can be done on the basis of solubility differences. The various classes or groups and their general significance are discussed briefly below.

Ether Insolubles

This group is usually a brown, humus-like powder, apparently composed to a large extent of carboxylic acids, ketones, and alcohols of complicated structure. Origin of the group, which is an indicator of "old" pollution, is believed to be partially oxidized sewage and industrial wastes. For example, the Ohio River at Cincinnati has been exposed to much industrial and sewage pollution, and hence large amounts of ether insoluble materials are found. Streams with little or no pollution history have little or no ether insolubles. Chloroform extracts contain from 0 to 30 percent of ether insoluble material.

Water Solubles

These substances are largely acidic and undistillable at moderate temperatures, but their solubility in ether indicates that the molecules are smaller and probably simpler than the ether-solubles. On the other hand, their water solubility practically requires the presence of several functional groups, such as hydroxy-acid, keto-acid, and keto-alcohol. Such compounds probably originate from partial oxidation of hydrocarbons or they may be natural substances. They have very little odor. These materials usually make up 10 to 20 percent of the total extract.

Weak Acids

This group is characterized by being removed from ether solution with sodium hydroxide but not with sodium bicarbonate. Phenols are the best known weak acids, and if present in the water, appear in this group. Other weakly acidic com-

pounds include certain enols, imides, sulfonamides, and some sulfur compounds. This group of materials also occurs in nature. The weak acids are odorous, and commonly constitute 5 to 20 percent of the chloroform extract.

Strong Acids

These acids are usually carboxylic acids such as acetic, benzoic, salicylic, or butyric. Although classified as strong in reference to carbonic acid, they are actually weak when compared with a mineral acid, such as sulfuric. Many of the compounds are used industrially, but may also be produced by natural processes, such as fermentation. Some of the materials are highly odorous. This fraction makes up from 5 to 20 percent of the total. The significance of the strong acids can be interpreted only in the light of stream pollution conditions.

Bases

These compounds are organic amines. Such materials as aniline and pyridine are amines of commerce. Lower amines may occur as a result of decomposition. Although odorous, the low concentrations found are not likely to cause objectionable conditions. However, in the case of specific amine-containing wastes the compounds can be of considerable significance. Generally, only 1 or 2 percent of the total extract is made up of the bases.

Neutrals

This group frequently constitutes the major portion of the chloroform extract. Neither basic nor acidic, the materials are less reactive and tend to persist in streams longer than many other types. Hydrocarbons, aldehydes, ketones, esters, and ethers are examples of neutral materials. The group lends itself to further fractionation by means of chromatographic separation into aliphatic, aromatic, and oxygenated subgroups:

Aliphatics: This portion represents petroleum type hydrocarbons in a considerable state of purity, and is usually made up of mineral oil type of material. The percentage of aliphatics present yields important information about the possible source of pollution, since petroleum is the most likely source.

Aromatics: These are principally the coal tar hydrocarbons such as benzene, toluene, and a host of others, and their presence in any significant amount is a reliable indication of industrial pollution. Further, the materials can frequently be identified by infrared spectrophotometry. Some aromatic compounds which have been found in our rivers—and in our drinking water—include DDT, aldrin, phyenyl ether, orthonitrochlorobenzene, pyridine, phenol, and others. The materials are highly odorous, and may also be toxic. Their appearance in any quantity as pollutants should receive careful evaluation.

Oxygenated compounds (Oxys): These are the neutral compounds containing oxygen, such as aldehydes, ketones, and esters. They may have originated by direct discharge or may represent oxidation products from both natural and industrial materials. They help to indicate the "age" of the pollution, since pollution exposed to oxidation forces for a long time would be expected to contain large amounts of oxys. The oxy materials are odorous.

Losses

Manipulative losses inherent in this type of separation may amount to 10 to 15 percent. Losses greater than this may indicate that volatile components were lost from the sample. Such volatiles may have significance as pollutants.

Alcohol Extracts

The alcohol extractables generally consist of materials more polar than the chloroform extractables. They often

665709 O—62——2

contain synthetic detergents, carboxylic acids and humic materials which may originate naturally or from oxidized products of domestic and industrial wastes. These classes of substances are not quantitatively recovered by the alcohol extraction. For example, this extraction recovers only 20 to 30 percent of the synthetic detergents present. On waters of mixed industrial and domestic pollution, the chloroform and alcohol extractables may be about equal. On some streams where the industrial pollution is rather low and much natural pollution or sewage is present, the alcohol extractables may exceed the chloroform extractables by a factor of 4 to 6.

The alcohol extract is usually only partially soluble in water and most ordinary solvents. Very little further chemical separation of this material is currently practical. However, tests have revealed that synthetic detergents may make up 1 to 12 percent of the alcohol extract.

Other Tests

Infrared spectra are routinely run on the total chloroform and alcohol extracts as well as the neutral, aliphatic, aromatic and oxygenated groups which are usually the most significant. Spectra of other groups are obtained when there is an indication that they may be significant. These spectra reveal something of the chemical structure of the materials, indicate differences and in certain instances provide a definite identification. In the case of the alcohol extracts, the infrared spectra will indicate the presence of synthetic detergents if the materials constitute a significant portion.

Composite Analysis

Samples from certain locations have been selected for analysis on a quarterly composite basis. Stations that have collected at least twelve samples in a nearly consecutive manner and averaged 100 ppb. or less of chloroform extractables are selected for such analysis when certain other conditions are met. However, samples falling in this category are analyzed individually when the recovery of the chloroform extract is exceptionally high and/or it is unusual in its infrared spectrum or some other physical characteristic.

Specific Identifications

Among 72 stations equipped with the carbon adsorption apparatus the highest single, and station average, values were noted on the Kanawha River at Winfield, W. Va. The highest single and station average values for alcohol extractables were found on the Ohio River at East Liverpool. The samples taken on the Animas River at Cedar Hill, N. Mex., recorded the lowest single and station average values for alcohol as well as chloroform extractables.

In spite of the fact that alcoholic extraction recovers only 20 to 30 percent of the detergents adsorbed on the carbon, detergents were identified in samples from 29 (40%) active stations. At 14 stations (19%) *every* sample collected contained detergents.

In December, 1960, alpha-conidendrin was identified in a sample collected on the Snake River at Wawawai, Wash. This material is a relatively innocuous natural constituent of coniferous trees and can, of course, be a by-product of the pulping process. This compound was not found in subsequent samples.

Infrared spectra of samples from stations on the Colorado River at Yuma, Ariz., Parker Dam and Hoover Dam indicated the presence of an unsaturated aliphatic compound which was not detected further upstream and which presumably persisted as far as Yuma, Ariz.

Chemical, Physical, and Bacteriological Examinations

The various biochemical, chemical, physical, and bacteriological examinations generally performed by the participating laboratories are discussed below.

Ammonia Nitrogen and Chlorine Demand

The cost of water treatment for domestic use is affected by the consumption of chlorine, with ammonia nitrogen being responsible for a large portion of the chlorine demand. The greater this demand, the more expensive is the treatment. The ammonia may originate from unstabilized domestic pollution, from industrial waste discharges, from run-off containing fertilizers used in farming operations or from all three. The presence of measurable quantities of nitrogen compounds, not necessarily ammonia, is also an indication of the fertility of the stream toward both macro- and micro-biological forms.

Color

Color in domestic water supplies is undesirable. Its removal in the water treatment process, whether it be from natural or industrial sources, may require large doses of chemicals and be expensive.

Dissolved Oxygen, Biochemical and Chemical Oxygen Demands

Biochemical processes, in which aquatic organisms attack and stabilize the organic matter present, require dissolved oxygen. If unstable oxidizable organic matter is present in excess, the organisms will multiply rapidly, consuming the oxygen present in the water, and bring about a foul, septic stream condition. The dissolved oxygen level thus serves to indicate the biochemical activity of the stream. High activity, resulting in low dissolved oxygen levels, will drive out game fish in favor of scavengers. Very low or zero oxygen levels will kill all fish and aquatic organisms dependent on dissolved oxygen for life. Temperature and reaeration rates also affect dissolved oxygen levels.

The 5-day biochemical oxygen demand (BOD) indicates the degree of unstabilized organic pollution from either domestic or industrial sources, to which the stream is being subjected. A significant demand will affect the fish and macroorganism population, and waters carrying a high BOD seldom contain game fish. On the other hand, game fish will thrive in streams in which the oxygen demand has been stabilized, as this condition is usually favorable for the growth of organisms on which fish feed.

The chemical oxygen demand analysis serves to support the findings of the biochemical oxygen demand test. It too may indicate to what extent the waste load of the stream has been stabilized, or it may indicate the presence of organic and inorganic pollution which is not readily oxidized by biological processes. Because the chemical oxygen demand can be determined quickly in comparison to the biochemical oxygen demand, the establishment of a correlation between the two parameters serves to reduce the number of the latter determinations required. The chemical demand results are nearly always higher than the biochemical demand.

Temperature

Temperature is particularly important to conservation and industry. A few degrees elevation in temperature due to cooling water discharges may seriously limit the capacity of a stream to support fish life. Also, high water temperatures increase the cost of cooling water for industrial operations. Cooling towers and other equipment for handling cooling water must be engineered to the temperature levels normally encountered.

Mineral Constituents

These determinations include alkalinity, hydrogen-ion concentration (pH), hardness, chlorides, sulfates, and total dissolved solids. The pH indicates whether water is acidic or alkaline, corrosive or passive. Alkalinity is a measure of the neutralization reserve present, or the extent to which the water can resist a change from an alkaline to an acid condition upon addition of acidic chemicals. This information is important to the water treatment plant operator and to many other water users.

Hardness is not only a measure of the soap consuming property, but is also of importance in the treatment of boiler waters, where removal of hardness is one of the most important functions. Chloride, sulfate, and total dissolved solids add further information on the gross dissolved mineral content carried by the stream. These are of great importance when considering the taste or palatability of water. They are also important when the water is being demineralized for specific industrial processes, since the cost of demineralization is a direct function of the dissolved solids content of the water. In addition, waters of high saline content are less desirable and may at times even be unfit for municipal, irrigation, and other uses.

Turbidity

Turbidity of water is due to the suspension of clay, silt, finely divided organic matter, microscopic organisms, and other similar materials. Its presence is of particular importance in water treatment processes and in the propagation of fish and other aquatic life.

Coliform Organisms

Information regarding fecal pollution is essential to water quality measurements. Data on coliforms help to point up the trends in the effectiveness of control of domestic waste discharges.

The delayed incubation membrane filter technique is used for the coliform examinations, instead of the fermentation tube (MPN) method. The latter would necessitate transport of water samples to the laboratory for examination, resulting in a time lapse between collection and examination which significantly changes the microbial content of the samples. Also, some of the many other bacteria present in raw water might overgrow or otherwise inhibit the demonstration of the coliforms. In the delayed incubation membrane filter procedure, the bacterial organisms are removed from the fluid sample immediately after collection and sent to the laboratory on a preservative medium. Thus, the resulting coliform count approaches very closely the actual number of coliform bacteria present in the water sample at the time of collection.

Trace Elements and Other Determinations

This year's data include the examination of two series of composite samples of raw water from each station for the dissolved constituents likely to be present in trace quantities or whose significance does not warrant more frequent analysis. Twice during the year, 4-month composites of the weekly samples were prepared and subjected to analysis. Examinations covered those elements which were considered to have possible physiological or toxicological significance to biological life and for which a reliable method was available. As new methods are developed, other determinations will be included. The ultimate goal of this phase of the program will be to provide background data on all elements which may be found in water and which may be of significance in water quality management.

In carrying out the spectrographic examination, the sample is first passed through a membrane filter to remove all suspended matter. An aliquot of the sample is then taken,

acidified with hydrochloric acid, and evaporated to a concentration containing 2 mg. of solids in 0.1 ml. of sample (20,000 ppm.). A 0.5-ml. portion of the concentrated sample is then placed on the electrode and arced to completion. Sample exposure is made through a stepped sector disc. The exposed plate is compared to a standard plate prepared under identical conditions.

Waters with low dissolved solids content can be concentrated to a greater degree than those having a high dissolved solids content, thus accounting for the apparently variable sensitivity shown in the tabulation. Values followed by an asterisk (*) show the limits of sensitivity at which the test was performed, and indicate that the ion being measured was not detected at that level. It is known that trace concentrations of many ions are subject to precipitation and adsorption on container surfaces during storage. This especially applies to iron and manganese which are particularly subject to oxidation and precipitation during storage. Hence, all the values reported by spectrographic method represent the quantity of the particular metal in solution at the time of analysis. It should be emphasized that the spectrographic analyses are semi-quantitative and represent an approximation of the actual value.

The measurement of potassium, sodium, fluoride, selenium and boron are performed according to flame or colorimetric procedures and are quantitative. The results, however, are rounded off to the significant figures reported.

The Cheng method, as given in Analytical Chemistry, *28*:1738(1956) was used for the selenium measurement. Fluoride examinations were made by the SPADNS procedure described by Bellack and Shouboe in Analytical Chemistry, 30:2032 (1958). Boron was measured by the curcumin procedure outlined in *Standard Methods for the Examination of Water and Wastewater*, Eleventh Edition, 1960.

Stream Flow

Stream flow data have a most important role in the utilization of water quality parameters such as are included in this report. For this reason, average daily flow records are reported for most of the sampling stations in the Network.

All flow data included in this compilation are *provisional* data furnished by the agencies credited, and are subject to revision by such agencies prior to any final publication. With the exceptions mentioned below, the flows are given as furnished to the Public Health Service.

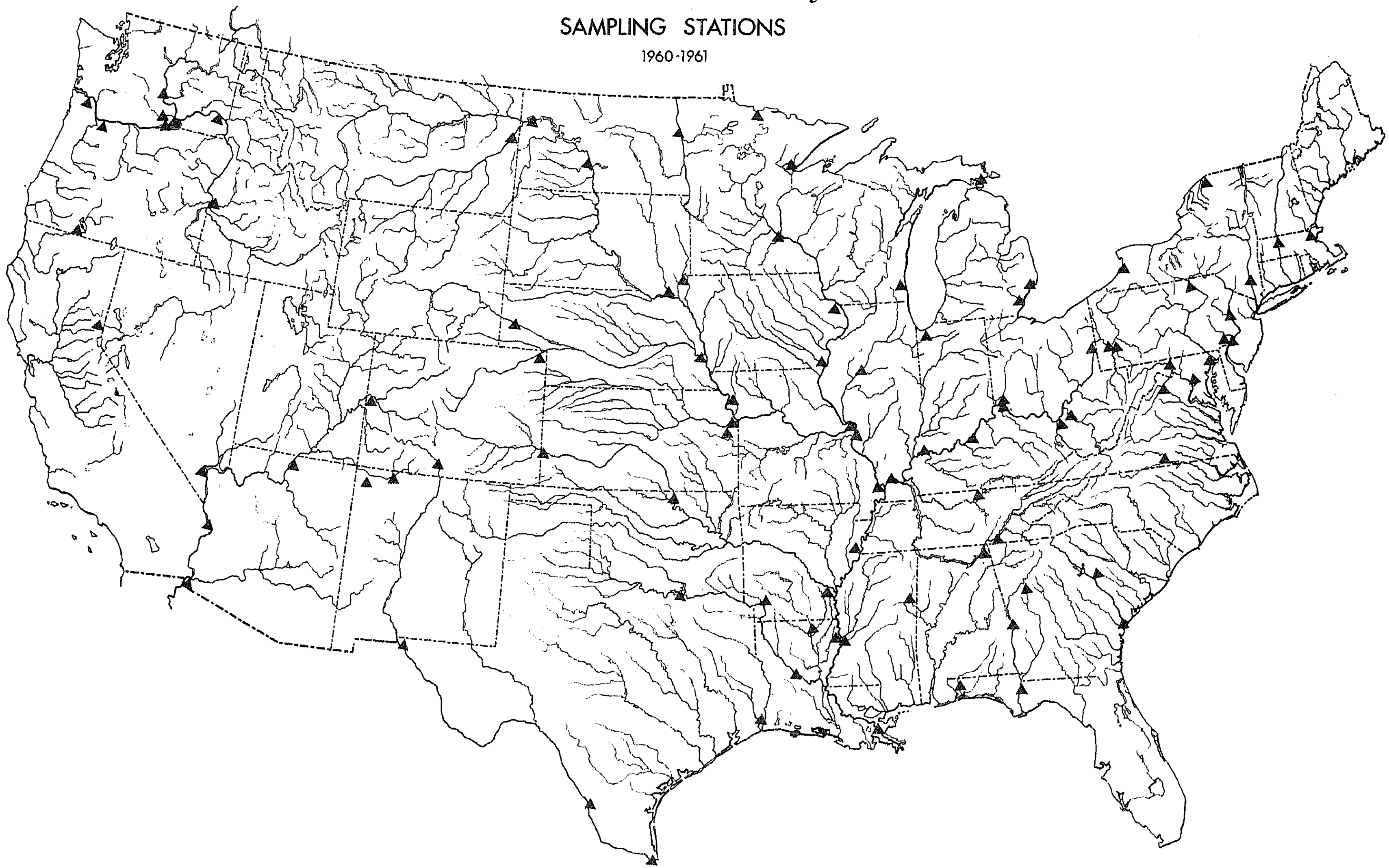
The data were generally furnished in units of cubic feet per second. In general only the first three digits were considered significant. Because of machine limitations the data are reported here in thousand cubic feet per second. Even though three zeros may appear after the decimal, no artificial accuracy of measurement is implied. Only the first three digits should be considered significant. There are two exceptions: (1) When the flow was over 1 million cubic feet per second, the first four digits are reported, and (2) at times when the Rio Grande flows were extremely low, the data were reported to tenths of a cubic foot per second. These figures are published showing 4 decimal places.

Flow data for sampling stations on the rivers of the Great Lakes system are reported as the monthly mean flow, as computed by the U.S. Lake Survey. In certain other rivers, flow data were computed by the Public Health Service from information supplied by the gauging agency. This was done for sampling stations on the Columbia River at Clatskanie and Bonneville Dam, Oreg., and Pasco, Wash.; for Northfield, Mass., on the Connecticut River; for Williamsport, Md., on the Potomac; and for Brownsville, Tex., on the Rio Grande.

PHS National Water Quality Network

SAMPLING STATIONS

1960-1961



SAMPLING STATIONS, COOPERATING AGENCIES, AND STREAM FLOW RECORDS

STATION	MILES ABOVE MOUTH	DESCRIPTION	SAMPLED BY	FIELD ANALYSES BY	OTHER COOPERATING AGENCIES	STREAM FLOW RECORDS: NEAREST GAGING STATION	OPERATED BY	PERIOD OF RECORD
ALLEGHENY RIVER at Pittsburgh, Pa.	8	Pittsburgh Filtration Plant Intake	Pittsburgh Dept. of Water	Pittsburgh Dept. of Water	Pennsylvania Dept. of Health	Natrona, Pa.	U.S. Geological Survey	1938 to date
ANIMAS RIVER at Cedar Hill, N. Mex.	33	Heizer Ranch at natural gas pipeline crossing	San Juan County Health Dept.	San Juan County Health Dept.	New Mexico Dept. of Public Health	Near Cedar Hill, N. Mex.	U.S. Geological Survey	1936 to date
APALACHICOLA RIVER at Chattahoochee, Fla.	105	Jim Woodruff Dam Powerhouse	U.S. Army Corps of Engineers Florida State Hospital Chattahoochee, Fla.	Florida State Hospital	Florida State Board of Health	Chattahoochee, Fla.	U.S. Geological Survey	1928 to date
ARKANSAS RIVER at Pendleton Ferry, Ark.	45	Ferry Landing, South Shore	Arkansas State Water Pollution Control Commission	Arkansas State Water Pollution Control Commission	Arkansas State Board of Health	Little Rock, Arkansas	U.S. Geological Survey	1927 to date
near Ponca City, Okla.	646	Old U.S. Highway No.60 Bridge (formerly at Osage Station, Okla. Gas & Electric Co.)	Ponca City Water Dept.	Ponca City Water Dept. U.S. Public Health Service	Oklahoma State Dept. of Health	Ralston, Oklahoma	U.S. Geological Survey	1938 to date
at Coolidge, Kansas	1,099	U.S. Geological Survey Stream Gaging Station	U.S. Geological Survey	U.S. Public Health Service	Kansas State Board of Health Colorado State Dept. of Health	near Coolidge, Kansas	U.S. Geological Survey	1903, 1921 1950 to date
BIG SIOUX RIVER below Sioux Falls, S.D.	158	1st bridge east of U.S. Hgwy. #229 below Sioux Falls	Sioux Falls Sewage Treatment Plant	Sioux Falls Sewage Treatment Plant	South Dakota Dept. of Health	Brandon, S. D.	U.S. Geological Survey	1959 to date
CHATTAHOOCHEE RIVER at Columbus, Georgia	160	Columbus Water Dept. Plant Intake	Columbus Water Dept.	Columbus Water Dept.	Georgia Dept. of Public Health	Columbus, Georgia	U.S. Geological Survey	1929 to date
at Atlanta, Georgia	303	Atlanta Water Dept. Plant Intake	Atlanta Water Dept.	Atlanta Water Dept.	Georgia Dept. of Public Health	Atlanta, Georgia	U.S. Geological Survey	1928, 1931 1936 to date
COLORADO RIVER at Yuma, Arizona	91	Arizona Water Co. Intake	Arizona Water Co.	Arizona Water Co.	Arizona State Dept. of Health	Below Yuma, Arizona	U.S. Geological Survey	1878 to date
above Parker Dam, Arizona-California	258	Aqueduct Intake, Metropolitan Water District of Southern California	Metropolitan Water District of Southern California	Metropolitan Water Distr. of Southern California U.S. Public Health Service	California State Dept. of Health California State Water Pollution Control Board	Below Parker Dam	U.S. Geological Survey	1934 to date
near Boulder City, Nevada	413	Boulder City (Nevada) Water Plant Intake	Boulder City Water Dept.	Boulder City Water Dept.	Nevada State Dept. of Public Health U.S. Bureau of Reclamation	Below Hoover Dam	Through U.S. Geological Survey U.S. Bureau of Reclamation	1935 to date

SAMPLING STATIONS, COOPERATING AGENCIES, AND STREAM FLOW RECORDS

STATION	MILES ABOVE MOUTH	DESCRIPTION	SAMPLED BY	FIELD ANALYSES BY	OTHER COOPERATING AGENCIES	STREAM FLOW RECORDS		
						NEAREST GAGING STATION	OPERATED BY	PERIOD OF RECORD
COLORADO RIVER (Cont'd.) at Page, Arizona	775	Page Water Plant Intake	U.S. Bureau of Reclamation	U.S. Bureau of Reclamation	Arizona State Dept. of Health Utah State Dept. of Health	Lees Ferry, Arizona	U.S. Geological Survey	1911 to date
at Loma, Colorado	1,150	Pumping Station at E. R. Smith Farm	Mesa County (Colorado) Dept. of Public Health	Grand Junction (Colorado) Water Dept.	Colorado State Dept. of Public Health	Near Colorado-Utah State Line	U.S. Geological Survey	1951 to date
COLUMBIA RIVER at Clatskanie, Oregon	53	Beaver Army Terminal U.S. Army Transp., Supply & Maintenance Command	U.S. Army U.S. Public Health Service	Oregon State Sanitary Authority U.S. Public Health Service		Clatskanie, Oregon *	U.S. Geological Survey	1926 to date
at Bonneville, Oregon	145	Bonneville Dam Powerhouse	U.S. Army Corps of Engineers	Crown Zellerbach Corp.	Oregon State Sanitary Authority Washington State Dept. of Health Washington State Pollution Control Commission	Bonneville, Oregon *	U.S. Geological Survey	1928 to date
at McNary Dam, Oregon	292	U.S. Army Engineer Project McNary Dam	U.S. Corps of Engineers Washington State Pollution Control Commission	U.S. Geological Survey	Washington State Dept. of Health	Below McNary Dam, Oregon	U.S. Geological Survey	1951 to date
at Pasco, Washington	327	Municipal Water Plant Intake	Pasco Water Dept.	Pasco Water Dept.	Washington State Dept. of Health Washington State Pollution Control Commission	Pasco, Washington *	U.S. Geological Survey	1933 to date
at Wenatchee, Wash.	465	Plant Intake, Aluminum Co. of America	Aluminum Co. of America	Aluminum Co. of America	Washington State Dept. of Health Washington State Pollution Control Commission	Trinidad, Washington	U.S. Geological Survey	1913 to date
CONNECTICUT RIVER below Northfield, Mass.	138	Central Vermont R.R. Bridge	Massachusetts State Dept. of Public Health	Massachusetts State Dept. of Public Health (Amherst Laboratory)		Vernon, Vermont *	U.S. Geological Survey	1936, 1938 1944 to date
CUMBERLAND RIVER at Clarksville, Tenn.	120	Clarksville Water Treatment Plant Intake	Clarksville Gas & Water Dept.	Clarksville Gas & Water Dept.	Tennessee Dept. of Public Health	Dover, Tennessee	U.S. Geological Survey	1939 to date
DELAWARE RIVER at Philadelphia, Pa.	110	Municipal Water Plant Intake (Torresdale Plant)	Philadelphia Water Dept.	Philadelphia Water Dept.	Pennsylvania State Dept. of Health	Trenton, New Jersey	U.S. Geological Survey	1913 to date
at Martins Creek, Pa.	191	at Martins Creek Steam Electric Station	Pennsylvania Power & Light Company	Pennsylvania Power & Light Company	Pennsylvania State Dept. of Health	Belvidere, New Jersey	U.S. Geological Survey	1922 to date
ESCAMBIA RIVER at Century, Florida	51	Highway Bridge on State Route #4	Florida State Board of Health	Florida State Board of Health		Near Century, Florida	U.S. Geological Survey	1934 to date

*Computed Data

SAMPLING STATIONS, COOPERATING AGENCIES, AND STREAM FLOW RECORDS

STATION	MILES ABOVE MOUTH	DESCRIPTION	SAMPLED BY	FIELD ANALYSES BY	OTHER COOPERATING AGENCIES	STREAM FLOW RECORDS		
						NEAREST GAGING STATION	OPERATED BY	PERIOD OF RECORD
GREAT LAKES Lake Erie at Buffalo, New York	-	Municipal Water Plant Intake	Buffalo Water Dept. Erie County (N.Y.) Health Dept.	Erie County (N.Y.) Health Dept.	New York State Dept. of Health	Cleveland, Ohio (Water Stages only)	U.S. Lake Survey	1900 to date
Detroit River at Detroit, Michigan	29	Municipal Water Plant Intake (Water Works Park)	Detroit Board of Water Commissioners	Detroit Board of Water Commissioners	Michigan State Dept. of Health Michigan State Water Resources Commission	Detroit, Michigan	U.S. Lake Survey	1936 to date
St. Clair River at Port Huron, Michigan	38	Municipal Water Plant Intake	City of Port Huron, Mich.	City of Port Huron, Mich.	Michigan State Dept. of Health International Joint Commission Michigan State Water Resources Board	Ft. Gratiot, Michigan	U.S. Lake Survey	1900 to date
Lake Michigan at Gary, Indiana	-	Gary-Hobart Water Corp. Intake	Gary-Hobart Water Corp.	Gary-Hobart Water Corp.	Indiana State Board of Health	Milwaukee, Wisconsin (Water Stages only)	U.S. Lake Survey	1905 to date
Lake Michigan at Milwaukee, Wisconsin	-	Municipal Water Plant Intake	City of Milwaukee, Wisconsin	City of Milwaukee, Wisc.	Wisconsin State Board of Health	Milwaukee, Wisconsin	U.S. Lake Survey	1860 to date
St. Marys River at Sault Ste. Marie, Michigan	48	Municipal Water Plant Intake	Sault Ste. Marie Water Dept.	Sault Ste. Marie Water Dept.	Michigan State Dept. of Health	Sault Ste. Marie, Mich.	U.S. Lake Survey	1900 to date
Lake Superior at Duluth, Minnesota	-	Municipal Water Plant Intake	Duluth Water, Gas & Sewage Treatment Dept.	Duluth Water, Gas & Sewage Treatment Dept.	Minnesota State Dept. of Health	Marquette, Michigan	U.S. Lake Survey	1900 to date
HUDSON RIVER below Poughkeepsie, New York	70 (est.)	International Business Machine Corp. Plant Intake	International Business Machine Corp.	International Business Machine Corp. New York State Dept. of Health	New York State Dept. of Health	Green Island, New York	U.S. Geological Survey	1946 to date
ILLINOIS RIVER at Peoria, Illinois	166	Peoria Water Works Company Plant Intake	Peoria Water Works Company	Peoria Water Works Co.	Illinois Dept. of Public Health	Kingston Mines, Illinois	U.S. Geological Survey	1939 to date
KANAWHA RIVER at Winfield Dam, West Virginia	30	Winfield Dam Power Plant	West Virginia Water Resources Commission	West Virginia Water Resources Commission	Kanawha Valley Power Company West Virginia State Dept. of Health	Charleston, West Virginia	U.S. Geological Survey	1939 to date
KLAMATH RIVER at Keno, Oregon	220	below Big Bend Plant of California Oregon Power Co.	California Oregon Power Co. City of Klamath Falls, Oregon Klamath County Health Dept.	Klamath Falls Sewage Treatment Plant	Oregon State Board of Health	Below Big Bend Power Plant near Keno, Oregon	U.S. Geological Survey	1904-1913 1930 to date
LITTLE MIAMI RIVER at Cincinnati, Ohio	2	at Beechmont Levee and U.S. State Highway #125	U.S. Public Health Service	U.S. Public Health Service	City of Cincinnati, Ohio Ohio Department of Health	Milford, Ohio	U.S. Geological Survey	1915 to date

SAMPLING STATIONS, COOPERATING AGENCIES, AND STREAM FLOW RECORDS

STATION	MILES ABOVE MOUTH	DESCRIPTION	SAMPLED BY	FIELD ANALYSES BY	OTHER COOPERATING AGENCIES	STREAM FLOW RECORDS		
						NEAREST GAGING STATION	OPERATED BY	PERIOD OF RECORD
MERRIMACK RIVER								
above Lowell, Mass.	42	Old Municipal Water Plant Intake	Lowell Water Dept.	Massachusetts State Dept. of Health (Lawrence Experiment Station)		Below Concord River at Lowell, Massachusetts	U.S. Geological Survey	1923 to date
MISSISSIPPI RIVER								
at New Orleans, La.	105	Municipal Water Plant Intake	New Orleans Sewage and Water Board	Louisiana State Dept. of Health	Louisiana State Dept. of Health	Red River Landing, La.	U.S. Geological Survey	1928 to date
at Vicksburg, Miss.	431	Municipal Water Plant Intake	Vicksburg Water Dept.	Mississippi State Board of Health		Vicksburg, Mississippi	U.S. Geological Survey	1931 to date
at Delta, Louisiana	433	River Landing, Delta Casting Yard, U.S. Corps of Engineers	Mississippi State Board of Health	Mississippi State Board of Health	Louisiana State Dept. of Health	Vicksburg, Mississippi	U.S. Geological Survey	1931 to date
at West Memphis, Ark.	726	Barge Terminal, Oklahoma-Mississippi River Products Lines, Inc.	Memphis (Tennessee) Light, Gas & Water Division	Memphis (Tennessee) Light, Gas & Water Division	Arkansas State Board of Health Tennessee Dept. of Public Health	Memphis, Tennessee	U.S. Geological Survey	1934 to date
at Cape Girardeau, Mo.	1,020	Missouri Utilities Co. Water Intake	Missouri Utilities Co.	Missouri Utilities Co.	Missouri Division of Health Missouri Water Pollution Board	Thebes, Illinois	U.S. Geological Survey	1933-1938 1939 to date
at East St. Louis, Ill.	1,166	East St. Louis Water Co. Intake	East St. Louis Water Co.	East St. Louis Water Co.	Illinois State Dept. of Public Health	Alton, Illinois	U.S. Geological Survey	1933-1938 1939 to date
at Burlington, Iowa	1,369	Municipal Water Plant Intake	Burlington Water Dept.	Burlington Water Dept.	Iowa State Dept. of Health	Keokuk, Iowa	U.S. Geological Survey	1878 to date
at Dubuque, Iowa	1,549	U.S. Army Corps of Engineers Lock & Dam # 11	Dubuque Water Dept.	Dubuque Water Dept.	Iowa State Dept. of Health	McGregor, Iowa	U.S. Geological Survey	1936 to date
Lock & Dam # 3 below St. Paul, Minn.	1,757	U.S. Army Corps of Engineers Lock & Dam # 3	U.S. Army Corps of Engineers, Minneapolis-St. Paul Sanitary Distr.	Minneapolis-St. Paul Sanitary District	Minnesota State Dept. of Health	Prescott, Wisconsin	U.S. Geological Survey	1928 to date
MISSOURI RIVER								
at St. Louis, Missouri	36	Water Plant Intake, St. Louis County Water Co. and Howard Bend Plant, City of St. Louis	St. Louis County Water Company St. Louis Water Dept.	St. Louis County Water Company St. Louis Water Dept.	Missouri Division of Health Missouri Water Pollution Board	Hermann, Missouri	U.S. Geological Survey	1897 to date
at Kansas City, Kansas	385	Municipal Water Plant Intake	Kansas City (Kansas) Board of Public Utilities	Kansas City (Kansas) Board of Public Utilities	Kansas State Board of Health	Kansas City, Missouri	U.S. Geological Survey	1897 to date
at St. Joseph, Missouri	471	St. Joseph Water Co. Intake	St. Joseph Water Co.	St. Joseph Water Co.	Missouri Division of Health Missouri Water Pollution Board	St. Joseph, Missouri	U.S. Geological Survey	1927 to date
at Omaha, Nebraska	642	Metropolitan Utilities Distr. Water Plant Intake	Metropolitan Utilities District	Metropolitan Utilities District	Nebraska State Dept. of Health	Omaha, Nebraska	U.S. Geological Survey	1928 to date
at Yankton, South Dakota	841	Municipal Water Plant Intake	Yankton Water Dept.	Yankton Water Dept.	South Dakota State Board of Health	Yankton, South Dakota	U.S. Geological Survey	1930 to date
at Bismarck, North Dakota	1,377	Municipal Water Plant Intake	Bismarck Water Dept.	Bismarck Water Dept. North Dakota State Dept. of Health		Bismarck, North Dakota	U.S. Geological Survey	1927 to date

SAMPLING STATIONS, COOPERATING AGENCIES, AND STREAM FLOW RECORDS

STATION	MILES ABOVE MOUTH	DESCRIPTION	SAMPLED BY	FIELD ANALYSES BY	OTHER COOPERATING AGENCIES	STREAM FLOW RECORDS: NEAREST GAGING STATION	STREAM FLOW RECORDS: OPERATED BY	STREAM FLOW RECORDS: PERIOD OF RECORD
MISSOURI RIVER (Cont'd.) at Williston, North Dakota	1,644	Municipal Water Plant Intake	Williston Water Dept.	Williston Water Dept.	North Dakota State Dept. of Health	Near Williston, North Dakota	U.S. Geological Survey	1928 to date
MONONGAHELA RIVER at Pittsburgh, Pa.	4	Hayes Mine Filter Plant	South Pittsburgh Water Co.	South Pittsburgh Water Co.	Commonwealth of Pennsylvania	Braddock, Pa.	U.S. Geological Survey	1938 to date
NORTH PLATTE RIVER above Henry, Nebraska	500	Above Henry, Nebraska at irrigation diversion dam	West Nebraska Branch Lab. Nebraska State Dept. of Health	West Nebraska Branch Lab.	Nebraska State Dept. of Health Mitchell Irrigation District	Wyoming-Nebraska State Line	U.S. Geological Survey	1929 to date
OHIO RIVER at Cairo, Illinois	3	Cairo Water Co. Intake	Cairo Water Co.	Cairo Water Co.	Illinois State Dept. of Public Health	Metropolis, Illinois	U.S. Geological Survey	1934 to date
at Evansville, Indiana	190	Municipal Water Plant Intake	Evansville Water Dept.	Evansville Water Dept.	Indiana State Board of Health	Evansville, Indiana	U.S. Geological Survey	1936 to date
at Louisville, Kentucky	370	Louisville Water Co. Filter Plant	Louisville Water Co.	Louisville Water Co.		Louisville, Kentucky	U.S. Geological Survey	1928 to date
at Cincinnati, Ohio	518	Municipal Water Plant Intake	Cincinnati Water Dept.	Cincinnati Water Dept.	Ohio State Dept. of Health	Cincinnati, Ohio	U.S. Geological Survey	1936 to date
at Huntington, West Virginia	677	Huntington Water Corp. Intake	Huntington Water Corp.	Huntington Water Corp.	West Virginia State Dept. of Health	Huntington, West Virginia	U.S. Geological Survey	1934 to date
at East Liverpool, Ohio	941	Municipal Water Plant Intake	East Liverpool Water Dept.	East Liverpool Water Dept.	Ohio State Dept. of Health	Sewickley, Pennsylvania	U.S. Geological Survey	1933 to date
OUACHITA RIVER at Bastrop, Louisiana	215	River Bank Seven Miles West of Bastrop, La.	Louisiana Wildlife & Fisheries Commission	Louisiana Wildlife & Fisheries Commission	Louisiana Stream Control Commission Louisiana State Board of Health	Near Arkansas-Louisiana State Line	U.S. Geological Survey	1958 to date
PLATTE RIVER above Plattsmouth, Nebraska	2	at U.S. Highway # 73 Bridge	Nebraska State Dept. of Health City of Plattsmouth	Nebraska State Dept. of Health		Louisville, Nebraska	U.S. Geological Survey	1953 to date
POTOMAC RIVER at Great Falls, Md.	126	Washington, D.C. Water Plant Intake	U.S. Army Corps of Engineers	U.S. Army Corps of Engineers	Maryland State Dept. of Health	Near Washington, D.C. *	U.S. Geological Survey	1930 to date
at Williamsport, Md.	212	Hagerstown Municipal Water Plant Intake	Hagerstown Water Dept.	Hagerstown Water Dept.	Maryland State Dept. of Health	Williamsport, Maryland *	U.S. Geological Survey	1928 to date

*Computed Data

SAMPLING STATIONS, COOPERATING AGENCIES, AND STREAM FLOW RECORDS

STATION	MILES ABOVE MOUTH	DESCRIPTION	SAMPLED BY	FIELD ANALYSES BY	OTHER COOPERATING AGENCIES	STREAM FLOW RECORDS: NEAREST GAGING STATION	STREAM FLOW RECORDS: OPERATED BY	STREAM FLOW RECORDS: PERIOD OF RECORD
RAINY RIVER at Baudette, Minnesota	9	Intake at east end of wooden pier of Canadian National Railroad Bridge	Baudette Light & Power Dept.	U.S. Public Health Service	Minnesota State Dept. of Health	Manitou Rapids, Minnesota	U.S. Geological Survey	July, 1928 to date
RED RIVER (North) at Grand Forks, North Dakota	296	Municipal Water Plant Intake	Grand Forks City Water Dept.	Grand Forks City Water Dept.	North Dakota State Dept. of Health	Grand Forks, North Dakota	U.S. Geological Survey	1901-1957
RED RIVER (South) at Alexandria, Louisiana	122	Pumping Station on Levee Near City Wells	Alexandria Water Dept.	Louisiana State Dept. of Health (New Orleans Laboratory) Louisiana State Dept. of Health (Alexandria Laboratory)	Louisiana State Dept. of Health	Alexandria, Louisiana	Mississippi River Comm. U.S. Army Corps of Engineers	1928-1938 1938 to date
at Index, Arkansas	485	U.S. Highway No. 71 Bridge	Texarkana Water & Sewer Systems Arkansas State Water Pollution Control Commission	Arkansas State Water Pollution Control Commission	Arkansas State Board of Health	Index, Arkansas	U.S. Geological Survey	1936 to date
at Denison, Texas	726	Denison Dam Power House	U.S. Army Corps of Engineers	Denison Water Dept.	Texas State Dept. of Health	Colbert, Oklahoma	U.S. Army Corps of Engineers	1923 to date
RIO GRANDE at Brownsville, Texas	40	Brownsville Filtration Plant Plant # 1 Intake	Brownsville Water Dept.	Brownsville Water Dept.	Texas State Dept. of Health	Lower Brownsville, Texas *	International Boundary & Water Commission	1934 to date
at Laredo, Texas	356	Municipal Water Plant Intake	Laredo Water Dept.	Laredo Water Dept.	Texas State Dept. of Health	Laredo, Texas	International Boundary & Water Commission	1923 to date
at El Paso, Texas	1,234	Municipal Water Plant Intake	El Paso Public Service Board	El Paso Public Service Board	Texas State Dept. of Health	Below Caballo Dam, New Mexico	U.S. Bureau of Reclamation	1938 to date
below Alamosa, Colo.	1,755	Below Alamosa at State Highway # 142 Bridge	Colorado State Dept. of Public Health	Colorado State Dept. of Public Health		Near Lobatos, Colorado	U.S. Geological Survey	1953 to date
ROANOKE RIVER at John H. Kerr Reservoir & Dam, Virginia	151	at John H. Kerr Dam and Reservoir	U.S. Army Corps of Engineers	U.S. Army Corps of Engineers	Virginia State Water Control Board	Buggs Island, Virginia	U.S. Geological Survey	1953 to date
SABINE RIVER near Ruliff, Texas	40	Sabine River Authority Pumping Plant	Sabine River Authority	U.S. Public Health Service	U.S. Geological Survey Texas State Dept. of Health	Near Ruliff, Texas	U.S. Geological Survey	1924 to date
ST. LAWRENCE RIVER at Massena, New York	422	Aluminum Foundry Plant Intake	Chevrolet Motor Div. General Motors Corp. Aluminum Foundry	Chevrolet Motor Div. General Motors Corp. Aluminum Foundry	New York State Dept. of Health	International Rapids Section (St. Lawrence Power Pool)	U.S. Army Corps of Engineers	1860 to date

*Computed Data

SAMPLING STATIONS, COOPERATING AGENCIES, AND STREAM FLOW RECORDS

STATION	MILES ABOVE MOUTH	DESCRIPTION	SAMPLED BY	FIELD ANALYSES BY	OTHER COOPERATING AGENCIES	STREAM FLOW RECORDS: NEAREST GAGING STATION	STREAM FLOW RECORDS: OPERATED BY	STREAM FLOW RECORDS: PERIOD OF RECORD
SAN JUAN RIVER at Shiprock, New Mexico	208	At U.S. Bureau of Mines Helium Plant Water Intake	San Juan County Health Dept.	San Juan County Health Dept.	New Mexico Dept. of Public Health	Shiprock, New Mexico	U.S. Geological Survey	1912 to date
SAVANNAH RIVER at Port Wentworth, Georgia	22	State Highway No. 17 Bridge	Union Bag-Camp Paper Co. U.S. Army Corps of Engineers Chatham County Health Dept.	Union Bag-Camp Paper Co. U.S. Public Health Service	Georgia State Dept. of Public Health	Clyo, Georgia	U.S. Geological Survey	1930, 1933 1937 to date
at North Augusta, South Carolina	217	Municipal Water Plant Intake	North Augusta Water Dept.	North Augusta Water Dept.	South Carolina State Dept. of Health	Augusta, Georgia	U.S. Geological Survey	1898-1906 1927-1931 1938 to date
SCHUYLKILL RIVER at Philadelphia, Pa.	10	Municipal Water Plant Intake	Philadelphia Water Dept.	Philadelphia Water Dept.	Pennsylvania Dept. of Health	Philadelphia, Pennsylvania	U.S. Geological Survey	1931 to date
SHENANDOAH RIVER at Berryville, Virginia	22	Corps of Engineers Pumping Station near Berryville, Virginia	U.S. Army Corps of Engineers	U.S. Army Corps of Engineers		Millville, West Virginia	U.S. Geological Survey	1928 to date
SNAKE RIVER at Wawawai, Washington	111 (est.)	Pumping Station at I. E. Wilson Farm	Washington State University	Washington State University	Washington State Dept. of Health	Near Clarkston, Washington	U.S. Geological Survey	1915 to date
at Weiser, Idaho	354	Municipal Water Plant Intake	Weiser Water Dept.	Weiser Water Dept.	Idaho State Board of Health	Weiser, Idaho	U.S. Geological Survey	1910 to date
SOUTH PLATTE RIVER at Julesburg, Colorado	87	At Julesburg Sewage Treatment Plant	Northeast Colorado Health Dept.	Northeast Colorado Health Dept.	Colorado State Dept. of Health	Julesburg, Colorado	State of Colorado Dept. of Water Resources	1902-1906 1908-1921 1925 to date
SUSQUEHANNA RIVER at Conowingo, Maryland	10	Conowingo Hydro Electric Plant, Conowingo Dam	Baltimore Bureau of Water Supply Philadelphia Electric Co.	Baltimore Bureau of Water Supply Philadelphia Electric Co.	Maryland State Dept. of Health	Marietta, Pennsylvania	U.S. Geological Survey	1931 to date
at Sayre, Pennsylvania	286	Sayre Water Co. Plant Intake	Sayre Water Company	Sayre Water Company	Pennsylvania Dept. of Health	Near Waverly, New York	U.S. Geological Survey	1937 to date
TENNESSEE RIVER at Bridgeport, Alabama	408	at TVA Widows Creek Steam Electric Plant	Stream Pollution Control Section Tennessee Valley Authority	TVA Stream Pollution Laboratory	Tennessee Dept. of Public Health	Hales Bar, near Chattanooga, Tenn.	U.S. Geological Survey	1930 to date

SAMPLING STATIONS, COOPERATING AGENCIES, AND STREAM FLOW RECORDS

STATION	MILES ABOVE MOUTH	DESCRIPTION	SAMPLED BY	FIELD ANALYSES BY	OTHER COOPERATING AGENCIES	STREAM FLOW RECORDS		
						NEAREST GAGING STATION	OPERATED BY	PERIOD OF RECORD
TENNESSEE RIVER (Cont'd.) at Chattanooga, Tennessee	467 (est.)	City Water Company Intake	City Water Company of Chattanooga	City Water Company of Chattanooga Tennessee Valley Authority	Tennessee State Dept. of Health	Chattanooga, Tennessee	U.S. Geological Survey	1874-1913 1915-1930 1936 to date
TOMBIGBEE RIVER below Columbus, Mississippi	368	At YMCA Camp Pratt, 11 miles south of Columbus, Miss.	Lowndes County Health Dept.	Lowndes County Health Dept.	Mississippi State Board of Health	Columbus, Mississippi Steens, Mississippi	U.S. Geological Survey U.S. Geological Survey	1918 to date 1939 to date
TRUCKEE RIVER at Farad, California below California-Nevada Border	82	Below Farad Power Station of Sierra Pacific Power Co.	California Dept. of Water Resources	Nevada County Health Dept.	Sierra Pacific Power Co. California Dept. of Public Health Nevada Dept. of Public Health	Farad, California	U.S. Geological Survey	1900-1909 1938 to date
YAKIMA RIVER at Richland, Washington	5.2	Richland Municipal Water Intake	City of Richland, Washington	Richland Water Dept.	Washington State Board of Health Washington Pollution Control Commission	Kiona, Washington	U.S. Geological Survey	1896-1915 1933-1950 1959 to date
YELLOWSTONE RIVER near Sidney, Montana	30	Intake - Lewis & Clark Station, Montana-Dakota Utilities Co.	Montana-Dakota Utilities Co.	Montana-Dakota Utilities Co.	Montana State Board of Health	Near Sidney, Montana	U.S. Geological Survey	1934 to date

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Explanation of Analytical Data

Radioactivity Determinations

Sample collection has continued on a weekly basis. Beginning July 1, 1960, samples from certain stations were placed on a reduced program of analyses; i.e., on semimonthly or monthly composites of the weekly samples. This was done where the history of gross radioactivity in the suspended or filtrate solids showed no significant levels during the previous data year. Alpha determinations were made once per month at each of the stations.

In evaluating these data it should be noted that these statistics are subject to errors commonly associated with gross radioactivity analysis. (See Reference 20.)

A dash in the column for the count signifies that no determination was made. An asterisk following data of sample indicates that determinations are for composites of two or more samples taken on and before the date shown.

Strontium 90 determinations are reported in micromicrocuries per liter as measured from total solids in the sample composited for the quarter. A dash (—) indicates that no determination was made in that period.

Plankton Population

Blanks in any column are to be read as meaning that none of the organisms for that column were found. The column heading "Dominant Genera" should be interpreted in connection with the table "Plankton—Dominant Organisms" on page 23: 5–946 should be interpreted that the fifth organism of the first column, Chlorella, was named. None of the organisms in the second column of the table were named. The 9 is the ninth item in the third column of the table—Stephanodiscus, 4 is the fourth item in the fourth column—Diatoma, and the 6 is the sixth item in the fifth column—Fragilaria. Five dashes in the column of "Dominant Genera" mean that none were named for that report.

Dominant species of diatoms, percent of total diatoms.

*	Less than 5%	50	45 to 54%
10	05 to 14%	60	55 to 64%
20	15 to 24%	70	65 to 74%
30	25 to 34%	80	75 to 84%
40	35 to 44%	90	85 to 100%

Plankton—Dominant Organisms

I	II	III	IV	V
1. Additional Filamentous Green Alga	Additional Green Flagellate	Actinastrum	Golenkinia	Additional Pigmented Flagellate (Other than green)
2. Anabaena	Aphanizomenon	Additional Desmid	Additional Coccoid Green Alga	Additional Coccoid Blue-Green Alga
3. Asterionella	Cryptomonas	Anacystis	Chlamydomonas	Additional Diatoms
4. Cyclotella	Cyclotella	Ciliates	Diatoma	Additional Filamentous Blue-Green Alga
5. Chlorella	Gomphonema	Coelastrum	Cymbella	Ankistrodesmus
6. Cosmarium	Oscillatoria	Dinobryon	Nitzschia	Fragilaria
7. Synedra	Peridinium	Navicula	Synedra	Melosira
8. Euglena	Scenedesmus	Oocystis	Tabellaria	Micractinium
9. Phormidium	Unpigmented Flagellate	Stephanodiscus	Tribonema	Sarcodina

Identification Code for Diatom Species as reported by the National Water Quality Network

NO.	SPECIES	NO.	SPECIES	NO.	SPECIES
01	Achnanthes lanceolata	16	Cocconeis placentula	31	Cymbella ventricosa
02	Achnanthes minutissima	17	Cocconeis sp.	32	Cymbella tumida
03	Achnanthes sp.	18	Coscinodiscus rothii	33	Cymbella sp.
04	Amphiprora paludosa	19	Coscinodiscus (brackish)	34	Denticula sp.
05	Amphiprora sp.	20	Coscinodiscus sp.	35	Diatoma elongatum
06	Amphora ovalis	21	Cymatopleura solea	36	Diatoma vulgare
07	Amphora sp.	22	Cymatosira belgica	37	Diatoma sp.
08	Anomoeoneis exilis	23	Cyclotella atomus	38	Diploneis smithii
09	Asterionella formosa	24	Cyclotella comta	39	Diploneis sp.
10	Bacillaria paradoxa	25	Cyclotella kutzingiana	40	Epithemia turgida
11	Biddulphia laevis	26	Cyclotella meneghiniana	41	Epithemia sorex
12	Caloneis amphisbaena	27	Cyclotella pseudostelligera	42	Epithemia sp.
13	Caloneis sp.	28	Cyclotella stelligera	43	Eunotia sp. (first)
14	Ceratoneis arcus	29	Cyclotella striata	44	Eunotia sp. (second)
15	Cocconeis peduculus	30	Cyclotella sp.	45	Fragilaria capucina

665709 O—62——3

Identification Code for Diatom Species as reported by the National Water Quality Network—Continued

NO.	SPECIES	NO.	SPECIES	NO.	SPECIES
46	Fragilaria construens	65	Navicula sp. (first)	83	Stephanodiscus niagarae
47	Fragilaria crotonensis	66	Navicula sp. (second)	84	Stephanodiscus sp.
48	Fragilaria pinnata	67	Nitzschia acicularis	85	Surirella brightwelli
49	Fragilaria sp.	68	Nitzschia tryblionella	86	Surirella ovata
50	Frustulia sp.	69	Nitzschia denticula	87	Surirella striatula
51	Gomphonema olivaceum	70	Nitzschia (Lancelolatae group)	88	Surirella sp.
52	Gomphonema sp.	71	Nitzschia sp. (first)	89	Synedra acus
53	Gyrosigma kutzingii	72	Nitzschia sp. (second)	90	Synedra pulchella
54	Gyrosigma sp.	73	Opephora martyi	91	Synedra nana
55	Hantzchia amphioxys	74	Pinnularia sp.	92	Synedra ulna
56	Melosira ambigua	75	Pleurosigma delicatulum	93	Synedra vaucheriae
57	Melosira distans var. alpigena	76	Rhoicosphenia curvata	94	Synedra sp.
58	Melosira granulata	77	Rhizosolenia eriensis	95	Tabellaria fenestrata
59	Melosira binderana	78	Rhopalodia gibba	96	Tabellaria flocculosa
60	Melosira islandica	79	Rhopalodia sp.	97	Any entity not found above (first)
61	Melosira italica	80	Stephanodiscus astraea var. minutula	98	Any entity not found above (second)
62	Melosira varians			99	Reserved for future entity
63	Meridion circulare	81	Stephanodiscus dubius	xx	Insignificant or population inadequate
64	Navicula cryptocephala	82	Stephanodiscus hantzschii		

Organic Chemicals

The data relating to extractables are in micrograms per liter or parts per billion. Zeros when reported have been entered. A dash indicates that the respective results were not reported. An asterisk in the column showing end of sample date indicates that the determinations are for composited samples taken on and before the date shown. The extent of compositing can be determined by examining the gallons filtered, which is the sum of the applicable individual samples immediately above it.

Chemical, Physical and Bacteriological Analyses

The data entered in each column are as reported. A dash signifies that the particular test was not performed. Zeros when meaningful have been entered. An asterisk preceding a coliform count should be read as "less than" the number following it.

Trace Elements and Other Determinations

For a discussion of the sensitivity limits of the determinations performed with spectrographic methods, see page 10.

Analytical and Flow Data

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE PENNSYLVANIA

MAJOR BASIN OHIO RIVER

MINOR BASIN ALLEGHENY RIVER

STATION LOCATION ALLEGHENY RIVER AT PITTSBURGH, PENNSYLVANIA 79

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
2	8	61	2	28	0	0	0	0	0	0									
2	15	61	3	6	0	0	0	0	0	0									
2	21	61	3	8	44	0	44	46	0	46									
3	1	61	3	21	3	0	3	3	0	3									
3	8	61	3	30	0	0	0	9	0	9									
3	15	61	3	31	0	0	0	0	0	0									
3	22	61	4	5	0	0	0	0	1	1									
3	29	61	4	17	0	0	0	0	0	0									
4	5	61	4	17	0	0	0	0	0	0									
4	12	61	4	27	0	0	0	0	0	0									
4	19	61	5	10	0	0	0	0	0	0									
4	26	61	5	22	1	0	1	0	0	0									
5	3	61	5	25	0	0	0	0	3	3									
5	10	61	6	1	0	0	0	1	2	3									
5	17	61	5	31	0	0	0	0	3	3									
5	24	61	6	14	0	0	0	1	0	1									
5	31	61	6	20	0	0	0	0	0	0									
6	7	61	6	28	0	0	0	0	0	0									
6	16	61	7	6	0	0	0	0	0	0									
6	21	61	7	28	0	1	1	0	0	0									
6	28	61	7	31	0	0	0	0	0	0									
7	5	61	8	7	0	0	0	0	0	0									
7	11	61	8	10	0	0	0	0	0	0									
7	18	61	8	8	0	1	1	0	0	0									
7	26	61	8	24	0	0	0	0	8	8									
8	2	61	9	1	0	0	0	3	19	22									
8	9	61	9	12	0	0	0	3	3	6									
8	16	61	9	26	0	0	0	0	1	1									
8	23	61	9	27	0	1	1	0	3	3									
8	30	61	9	27	0	0	0	1	6	7									
9	6	61	10	11	0	0	0	0	0	0									
9	13	61	10	23	0	0	0	0	5	5									
9	20	61	10	7	1	1	2	0	2	2									
9	27	61	10	5	0	0	0	0	28	28									

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE PENNSYLVANIA

MAJOR BASIN OHIO RIVER

MINOR BASIN ALLEGHENY RIVER

STATION LOCATION ALLEGHENY RIVER AT PITTSBURGH, PENNSYLVANIA

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS														PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE							
2	8	61																											------
3	1	61	500				20			20	420	90	1050	92	10	62	10	16	10	2	10	70					5		------
3	15	61	200								220	50	130	43	10	82	10	2	10	74	10	70	20						------
4	5	61	1100			20		130		440	470		90	93	40	35	10	92	10	9	10	40	20						--97-
4	26	61	2700			40		170		170	2280	60	520	9	20	93	10	92	10	31	10	50							3-773
5	10	61	1500			20		130		190	1140		100	9	40	45	10	92	10	56	10	40	80		12				3----
5	31	61	800			20		80		210	540	20	100	92	50	9	10	56	10	82	*	30			5		1		---7-
6	21	61	200			40		40			70		20	92	30	62	20	82	10	9	10	50			2				------
7	5	61	500		120	190		120		40	20	20	20	92	10	82	10	2	10	9	10	60							------
7	19	61	200		20	20				40	80	20		82	10	47	10	92	10	31	10	80			1	2			------
8	2	61	400		20			20		60	250	20	20	95	20	88	10	2	10	92	10	50			27	5	1		------
8	23	61	500			60		370		20	20			88	30	92	10	82	10	31	*	60							---3-
9	6	61	100		20			20	20	20	60			88	50	92	10	97	10	82	*	40			6		1		------
9	20	61	300			40		100	80		20		20	88	60	97	*	82	*	2	*	30			6	5			------

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE PENNSYLVANIA

MAJOR BASIN OHIO RIVER

MINOR BASIN ALLEGHENY RIVER

STATION LOCATION ALLEGHENY RIVER AT PITTSBURGH, PENNSYLVANIA 79

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
3	1	61	3	15	2800	325	138	187	6	30	42	14	5	23	0	15	15	1	29
4	5	61	4	19	2846	168	72	96	3	14	29	11	4	13	1	7	6	1	12
5	3	61	5	18	1387	710	293	417	21	73	67	13	7	45	2	35	38	3	56
6	8	61	6	21	3748	305	154	151	9	34	39	9	4	26	0	17	23	3	29
7	17	61	7	26	2187	729	366	363	11	84	95	7	7	74	7	48	66	7	55
8	9	61	8	28	5257	307	140	167	7	32	32	2	2	25	3	16	21	1	31

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE PENNSYLVANIA
MAJOR BASIN OHIO RIVER
MINOR BASIN ALLEGHENY RIVER
STATION LOCATION ALLEGHENY RIVER AT PITTSBURGH, PENNSYLVANIA 79

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
2	8	61	1.0	–	6.5	–	–	–	–	.4	35	16	152	0	5	159	.0	333	–
2	13	61	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5700
2	15	61	2.0	12.0	6.6	6.3	–	–	–	.4	36	18	158	0	8	163	.1	345	–
2	21	61	1.0	14.1	6.6	9.4	39	3.7	–	.1	26	21	108	45	500	52	.0	170	6400
3	1	61	4.0	12.8	6.6	1.8	32	1.3	–	.0	9	9	46	60	120	38	.0	91	4000
3	8	61	8.0	11.4	6.4	–	–	1.9	3.5	.0	12	9	62	5	25	54	.0	121	1700
3	15	61	5.0	11.6	6.6	1.8	56	1.1	4.1	.0	10	11	62	5	50	56	.0	137	640
3	22	61	5.0	12.4	6.8	1.9	49	.7	3.3	.0	–	14	70	0	25	63	.0	129	–
3	29	61	8.0	12.2	6.6	2.1	51	.7	2.9	.0	13	13	70	5	15	68	.0	128	600
4	5	61	6.0	11.0	6.5	1.5	62	.5	1.4	.1	15	12	78	0	12	72	.0	146	260
4	12	61	5.5	11.6	6.9	1.9	59	.3	1.4	.0	13	15	68	15	30	52	.0	132	2100
4	19	61	7.0	12.2	6.8	2.2	63	.4	2.0	.0	10	14	46	20	20	43	.0	122	1700
4	26	61	12.0	10.1	6.5	3.0	64	.7	2.9	.0	11	15	58	20	50	54	.0	140	4900
5	3	61	10.0	10.9	6.8	2.8	70	.7	3.0	.0	0	15	64	15	40	48	.0	148	1000
5	10	61	10.0	9.7	6.9	2.0	50	.6	2.3	.1	13	20	78	10	35	71	.0	153	1700
5	16	61	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3800
5	17	61	19.0	8.8	6.5	1.4	55	.3	2.8	.0	12	14	84	15	12	73	.0	159	–
5	24	61	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	500
5	31	61	15.0	9.9	6.8	1.7	50	.4	2.6	.0	11	14	82	10	10	79	.0	182	530
6	7	61	21.0	9.1	6.8	1.9	40	.4	2.4	.0	12	16	84	0	10	85	.0	172	–
6	16	61	20.0	9.0	6.8	1.3	52	.3	–	.0	12	15	60	20	45	52	.0	147	500
6	21	61	21.0	9.2	6.2	2.7	28	.5	2.7	.0	10	8	80	0	5	74	.0	156	–
6	28	61	21.0	8.9	6.0	1.3	25	.4	2.6	.0	14	8	96	0	5	90	.0	183	*100
7	5	61	23.0	8.2	6.6	1.0	26	.2	2.8	.0	19	16	118	1	5	115	.0	242	2900
7	11	61	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	400
7	12	61	24.0	7.6	6.7	2.6	24	.2	1.7	.0	21	10	132	0	3	128	.0	289	–
7	18	61	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	100
7	19	61	26.0	7.7	6.1	.8	42	.2	4.8	.0	22	9	148	0	5	145	.0	301	–
7	25	61	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	100
7	26	61	26.0	7.4	6.5	.7	39	.2	4.5	.1	23	14	132	20	45	126	.0	260	–
8	1	61	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6
8	2	61	27.0	8.6	6.6	2.2	28	.7	4.1	–	28	8	126	0	10	120	.0	279	–
8	8	61	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	*100
8	9	61	25.0	8.2	6.1	1.0	25	.5	3.4	–	16	7	86	0	5	85	.0	182	–
8	15	61	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	*100
8	22	61	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	300
8	23	61	26.0	8.4	6.4	1.5	5	.4	3.5	.1	28	12	134	0	5	125	.0	272	–
8	29	61	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	*100

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE PENNSYLVANIA

MAJOR BASIN OHIO RIVER

MINOR BASIN ALLEGHENY RIVER

STATION LOCATION ALLEGHENY RIVER AT PITTSBURGH, PENNSYLVANIA 79

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
8	30	61	27.0	8.0	5.7	3.6	18	.4	6.0	.3	25	8	152	0	5	150	.0	327	-
9	5	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6600
9	6	61	27.0	7.4	6.4	2.0	16	.4	5.3	.4	30	13	164	0	5	154	.0	331	-
9	12	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1600
9	13	61	28.0	7.7	6.5	1.8	-	.4	5.9	.4	38	18	156	0	5	148	.0	328	-
9	19	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2300
9	26	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3500
9	27	61	23.0	8.3	6.7	3.3	12	.4	6.6	.4	45	19	168	0	5	165	.0	363	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Natrona, Pennsylvania
Operated by U.S. Geological Survey

STATE Pennsylvania

MAJOR BASIN Ohio River

MINOR BASIN Allegheny River

STATION LOCATION Allegheny River at Pittsburgh, Pennsylvania

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	1.860	2.140	2.500	3.070	2.900	97.000	22.400	63.400	12.000	6.780	7.800	3.580
2	1.700	2.420	2.500	2.940	2.980	87.400	24.600	50.300	12.400	5.620	7.730	3.580
3	1.600	2.610	2.420	2.730	2.420	82.500	27.400	37.000	13.600	5.620	15.800	2.920
4	1.630	2.580	2.350	2.690	2.900	79.100	26.200	31.000	20.700	7.640	17.700	2.690
5	1.800	2.540	2.060	2.860	2.770	63.400	24.000	25.100	19.700	6.920	18.700	2.820
6	1.930	2.390	2.030	3.070	2.500	61.900	21.800	20.700	16.700	6.450	14.400	6.930
7	1.960	2.420	2.310	3.300	2.650	63.400	31.000	21.800	13.600	5.430	11.200	5.870
8	1.730	2.820	2.420	4.050	2.390	75.800	37.000	25.100	11.600	4.760	8.080	4.820
9	1.510	3.390	2.350	4.240	2.690	66.400	34.600	34.600	10.500	3.910	5.620	4.360
10	1.410	3.530	2.170	4.880	2.940	69.400	32.200	35.800	13.600	3.160	5.000	3.300
11	1.440	3.530	2.030	6.060	3.110	72.600	34.600	33.400	25.000	3.340	4.940	2.690
12	1.700	3.690	1.730	6.450	3.110	69.400	39.600	32.200	35.800	3.340	5.300	2.770
13	1.600	3.910	1.630	6.580	3.110	53.100	40.900	28.600	33.400	3.340	4.820	3.070
14	1.540	3.910	2.100	6.450	3.160	40.900	47.500	24.600	29.800	3.110	4.130	2.900
15	1.660	3.490	2.310	6.260	4.700	50.300	53.100	21.200	33.400	3.200	4.240	2.820
16	1.410	3.490	2.730	6.120	5.870	48.900	53.100	21.200	29.800	3.030	3.960	2.610
17	1.480	3.300	2.610	6.520	7.460	43.500	55.900	25.100	25.100	3.030	3.390	2.310
18	1.480	3.030	2.500	7.320	14.900	35.800	61.900	26.200	20.200	4.300	2.900	2.100
19	1.510	2.820	2.460	7.600	40.700	31.000	64.900	28.000	15.400	4.470	2.820	2.310
20	1.540	2.540	2.350	7.120	71.500	33.400	58.900	27.400	13.200	5.740	2.500	2.280
21	1.540	2.280	2.580	6.120	67.900	35.800	50.300	26.200	11.200	6.120	2.310	2.200
22	1.660	2.170	2.390	4.880	75.800	32.200	40.900	24.600	10.800	6.980	3.060	2.200
23	1.600	2.500	2.280	4.300	77.400	30.400	40.900	23.400	11.200	5.620	3.110	2.350
24	1.600	2.460	2.140	4.080	84.200	31.000	43.500	22.900	10.800	8.170	3.300	2.060
25	1.700	2.420	2.030	3.340	90.600	32.200	52.600	19.200	9.370	10.500	3.780	1.760
26	1.890	2.100	2.170	3.300	97.500	28.600	102.000	17.700	8.650	11.200	4.080	1.960
27	2.100	2.030	2.280	2.860	106.000	26.200	109.000	16.200	9.080	10.500	3.200	2.200
28	2.310	2.030	2.310	2.770	109.000	24.600	90.600	16.200	7.800	9.010	3.200	2.350
29	2.310	2.030	2.500	2.770		24.600	87.400	14.400	6.580	8.300	3.340	2.390
30	2.140	2.310	2.690	2.820		25.600	77.400	14.000	6.260	6.380	3.690	2.390
31	1.960		2.860	2.580		22.400		12.000		6.120	3.340	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE NEW MEXICO

MAJOR BASIN COLORADO RIVER

MINOR BASIN SAN JUAN RIVER

STATION LOCATION ANIMAS RIVER AT

CEDAR HILL, NEW MEXICO 56

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	3	60	10	18	1	19	20	0	29	29								
10	10	60	1	3	3	37	40	11	82	93								
10	17	60	11	1	0	2	2	87	22	109								
10	24	60	11	10	2	20	22	0	22	22								
10	31	60	11	18	6	21	27	8	35	43								
11	14	60	11	28	3	10	13	3	0	3								
11	21	60	12	19	4	21	24	6	43	49								
11	28	60	12	20	5	21	26	11	24	35								
12	5	60	12	30	37	32	69	153	57	210								
12	12	60	1	5	4	18	22	62	7	69								
12	19	60	1	6	58	35	93	178	45	223								
12	27	60	1	11	18	19	37	51	31	82								
1	3	61	2	8	13	24	37	36	26	62								
1	9	61	2	7	3	11	14	7	9	16								
1	17	61	2	6	6	23	29	11	19	30								
1	24	61	2	8	6	13	19	18	13	31								
1	31	61	2	13	17	25	42	75	30	105								
2	7	61	2	21	9	19	28	22	12	34								
2	21	61	3	21	11	10	21	20	7	27								
2	28	61	3	22	11	24	35	29	27	56								
3	7	61	3	30	21	19	40	67	48	115								
3	14	61	4	3	119	12	131	968	1	969								
3	21	61	4	12	156	12	168	1882	12	1894								
3	28	61	4	12	24	11	35	74	14	88								
3	31	61	5	1	0	27	27	0	21	21								
4	11	61	5	5	23	14	37	43	10	53								
4	17	61	5	11	11	7	18	23	1	24								
5	1	61	5	24	241	7	248	177	2	179								
5	8	61	5	26	5	6	11	10	0	10								
5	15	61	6	2	0	2	2	0	0	0								
5	22	61	6	13	18	0	18	31	0	31								
5	30	61	6	22	8	2	10	16	1	17								
6	7	61	6	29	2	9	11	0	2	2								
6	12	61	7	6	1	1	2	2	1	3								
6	19	61	9	5	0	1	1	2	14	16								
6	27	61	9	5	0	3	3	3	7	10								
7	5	61	8	10	0	3	3	0	0	0								
7	10	61	8	23	2	4	6	9	4	13								
7	17	61	9	8	0	4	4	4	12	16								
7	23	61	9	7	3	2	5	8	4	12								

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE NEW MEXICO

MAJOR BASIN COLORADO RIVER

MINOR BASIN SAN JUAN RIVER

STATION LOCATION ANIMAS RIVER AT

CEDAR HILL, NEW MEXICO 56

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
7	31	61	9	7	1	12	13	5	24	29								
8	7	61	10	3	1	4	5	4	10	14								
8	14	61	9	21	1	4	5	0	8	8								
8	21	61	10	17	4	6	10	6	11	17								
8	29	61	9	25	3	10	13	14	26	40								
9	6	61	10	11	0	1	1	5	14	19								
9	12	61	10	30	3	6	9	15	17	32								
9	18	61	10	9	0	4	4	3	10	13								
9	25	61	10	11	5	3	8	21	25	46								

WATER QUALITY BASIC DATA

STATE NEW MEXICO

MAJOR BASIN COLORADO RIVER

MINOR BASIN SAN JUAN RIVER

STATION LOCATION ANIMAS RIVER AT CEDAR HILL, NEW MEXICO 56

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	3	60	4500								4490		1630	85	30	70	50	93	10	71	*	10	20		5		1		7-663
10	17	60	7500		20	70		70	20	50	7250	20	790										40						757--
11	7	60	6100		20						6100		510	85	40	93	20	70	10	71	10	30	20						7-763
11	21	60	1200			20					1210		600	85	40	93	20	2	10	70	10	20		10	2				7--63
12	5	60	1700		20		20			40	1600	20	220	85	70	93	10	2	*	70	*	10	110		1		1	2	---73
1	3	61	1900				50				1880		1390	85	70	93	10	70	10	71	10	20	70	10	1				7--63
2	7	61	1600				20	20			1560		1180	85	70	93	10	92	*	71	*	10					7		--7-3
2	21	61	900			20	20			50	850	50	870	86	60	93	10	70	*	92	*	20					3		---73
3	7	61	4300				20	70		20	4220	40	150	86	70	93	20	70	*	71	*	10			16				7--63
3	21	61	800				50				760		510																----3
4	3	61	2100		20					20	2030	20	520	86	60	93	10	88	*	70	*	30							---73
4	17	61	1600							20	1550	20	950	86	30	93	10	2	10	70	*	40			2				7--63
5	1	61	11600				40			330	11200		4600	86	40	92	10	45	10	71	10	40							74763
5	15	61	600			20		40		60	520	40	560	2	20	86	20	93	10	92	10	50			2				-----
6	6	61	200							20	230	20	80	2	30	93	10	92	10	31	10	50							-----
6	19	61	100								70		70	2	40	36	10	92	10	52	10	40					1		-----
7	5	61	1300				20	40	20	120	1080		700	70	50	2	10	86	10	52	10	20			5	1		7	---63
7	17	61	1000			20	90	130		70	720	20	1010	84	30	92	20	2	20	70	10	20		20	197	1	9	9	---73
8	21	61	700					40		80	620		120	86	30	2	20	92	10	71	10	40			2		1	1	----3
9	6	61	1400		20		40			100	1220	40	460	86	50	93	10	92	10	70	10	30			13				7--63
9	18	61	1800					270	20	60	1410		310	86	60	92	10	2	10	93	*	20	40		1		3		7--33

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE NEW MEXICO
MAJOR BASIN COLORADO RIVER
MINOR BASIN SAN JUAN RIVER
STATION LOCATION ANIMAS RIVER AT
CEDAR HILL, NEW MEXICO 56

DATE OF SAMPLE					GALLONS FILTERED	CARBON CHLOROFORM EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	3	60	10	24	4970	89	14	75	0	2	8	1	1	5	1	2	1	0	1
11	7	60	11	21	8410	59	12	47	0	1	8	2	1	5	0	1	0	1	1
12	5	60	12	19	3384	83	16	67	0	1	12	4	1	7	0	1	0	0	2
1	3	61	1	12	8152	59	16	43	0	2	10	2	1	6	1	2	0	0	2
2	6	61	2	21	6393	62	12	50	0	2	7	1	1	5	0	1	0	0	2
3	7	61	3	17	6771	52	17	35	1	4	6	1	0	5	0	2	2	0	2
4	3	61	4	17	5631	51	19	32	1	4	8	1	1	6	0	2	2	0	2
5	2	61	5	13	7400	42	20	22	1	5	7	2	1	4	0	2	1	1	3
6	6	61	6	19		*	-	-	-	-	-	-	-	-	-	-	-	-	-
7	5	61	7	14	273	*	-	-	-	-	-	-	-	-	-	-	-	-	-
8	7	61	8	21	980	*	-	-	-	-	-	-	-	-	-	-	-	-	-
9	6	61	9	18	2431	127	53	74	1	7	25	6	3	15	1	9	4	1	6

*SAMPLE NOT PROCESSED-FLOW TOO LOW

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NEW MEXICO

MAJOR BASIN COLORADO RIVER

MINOR BASIN SAN JUAN RIVER

STATION LOCATION ANIMAS RIVER AT CEDAR HILL, NEW MEXICO 56

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	12.0	9.1	8.2	5.1	-	1.8	3.8	.0	42	186	290	10	3	220	.4	-	-
10	10	60	11.0	6.5	8.1	4.0	-	1.2	3.9	.0	47	210	294	10	18	170	.3	-	1400
10	17	60	9.0	8.2	8.1	1.9	-	2.5	4.2	.4	36	162	256	16	1100	208	.4	-	2200
10	24	60	10.0	9.8	8.2	.4	-	1.8	3.5	.3	28	164	282	12	20	300	.3	-	300
10	31	60	6.0	9.8	8.2	2.5	-	1.9	3.7	.1	30	172	272	15	8	300	.4	-	100
11	7	60	12.0	7.8	8.1	2.6	-	1.4	4.0	.0	35	168	282	20	1780	260	.5	-	800
11	14	60	6.0	5.5	8.1	5.2	-	1.8	2.7	.0	26	134	284	5	4	196	.6	-	-
11	21	60	5.0	11.6	8.1	2.7	-	1.8	2.4	.2	33	120	272	8	6	250	.4	-	*1000
11	28	60	3.0	10.4	8.1	2.1	-	1.9	2.7	.0	23	128	292	29	8	250	.3	-	*100
12	5	60	2.0	-	8.1	-	80	1.9	4.9	.1	34	116	272	18	70	236	.6	-	-
12	12	60	2.0	10.4	8.2	1.7	107	1.8	4.6	.1	22	124	276	15	32	180	.5	-	200
12	19	60	.0	11.0	8.1	*.9	82	2.5	5.0	.2	32	132	288	8	10	245	.6	-	-
12	27	60	.0	11.2	8.1	8.5	79	2.9	5.3	.4	39	124	272	5	16	220	.6	-	-
1	3	61	3.0	11.9	8.1	2.4	86	2.7	6.0	.3	42	146	264	4	24	370	.6	-	-
1	9	61	4.0	11.8	8.1	2.3	-	2.6	5.8	.1	25	130	268	4	20	180	.5	-	91
1	17	61	2.0	10.5	8.0	2.1	67	2.6	5.8	.1	39	138	258	6	8	296	.4	-	100
1	24	61	.0	10.4	8.1	2.0	-	-	-	.1	37	132	268	5	3	300	-	-	*100
1	31	61	1.0	10.6	8.1	2.3	-	-	-	.0	52	134	270	4	35	190	.3	-	*100
2	7	61	2.0	11.6	8.2	1.6	-	-	-	-	52	126	284	7	10	200	2.3	-	400
2	14	61	7.0	10.6	8.1	2.5	-	-	-	.2	42	136	272	22	353	380	1.2	-	*100
2	21	61	5.0	10.9	8.4	1.8	-	-	-	.2	56	134	276	8	90	220	-	-	*100
2	28	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*100
3	1	61	5.0	11.8	8.5	2.2	-	-	-	.2	59	140	300	20	28	240	.3	-	-
3	7	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
3	8	61	7.0	10.9	8.1	.8	-	-	-	.2	60	133	302	20	600	350	-	-	-
3	14	61	7.0	9.1	8.1	5.1	25	-	-	2.4	37	138	280	10	-	330	-	-	-
3	15	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10000
3	21	61	9.0	8.6	8.1	8.6	-	-	-	.1	35	126	260	45	4000	-	-	-	5000
3	28	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	630
3	29	61	6.0	9.5	8.1	7.8	95	-	-	.1	30	126	264	8	650	180	.4	-	-
4	3	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22000
4	4	61	13.0	7.7	8.0	2.4	-	-	-	.1	20	130	236	20	4000	120	.5	-	-
4	12	61	11.0	9.2	8.0	2.1	-	-	-	.0	18	116	204	10	130	55	-	-	-
4	17	61	10.0	9.0	8.0	1.2	-	-	-	.0	13	120	192	8	140	130	.3	-	3200
5	1	61	14.0	9.0	8.2	4.0	32	-	-	.2	9	56	110	7	870	28	-	-	6700
5	8	61	8.0	8.8	8.1	.4	37	-	-	.5	116	188	144	5	33	46	-	-	200
5	16	61	14.0	7.5	8.0	.4	-	-	-	.0	10	36	156	12	33	45	.0	-	-
5	22	61	12.0	6.5	7.9	.1	-	-	-	.2	9	46	80	12	365	28	.3	-	1500
5	29	61	14.0	7.7	-	.2	-	-	-	.0	8	20	78	10	200	24	-	-	1400

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NEW MEXICO
MAJOR BASIN COLORADO RIVER
MINOR BASIN SAN JUAN RIVER
STATION LOCATION ANIMAS RIVER AT
CEDAR HILL, NEW MEXICO 56

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
6	7	61	14.0	7.7	7.9	.5	-	-	-	.0	10	38	92	10	24	45	-	-	270
6	12	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	900
6	13	61	14.0	8.1	7.8	2.0	-	-	-	.1	8	10	102	15	32	36	.4	140	-
6	19	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
6	20	61	16.0	8.3	7.9	.1	-	4.3	-	.0	14	16	94	5	12	40	-	140	-
6	27	61	17.0	8.2	7.9	-	-	4.6	-	.0	19	20	120	6	22	56	.3	164	200
7	5	61	18.0	8.5	8.1	.9	-	3.8	5.3	.1	16	32	154	7	14	87	.3	220	1
7	10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1700
7	11	61	19.0	7.7	8.0	1.2	-	3.7	7.0	.0	21	32	172	5	65	80	.3	-	-
7	17	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4500
7	18	61	23.0	6.8	8.0	-	-	6.0	-	.1	39	42	220	4	12	115	1.0	360	-
7	23	61	23.0	9.2	8.1	1.8	-	3.9	6.9	.0	35	58	214	3	7	90	-	341	500
8	1	61	23.0	6.5	8.1	1.4	-	-	-	.1	49	140	244	15	23	140	.4	-	1900
8	7	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2300
8	8	61	21.0	7.8	8.0	.7	-	-	-	.1	25	106	182	3	32	70	.4	300	-
8	14	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*100
8	15	61	21.0	7.2	8.2	7.4	-	-	-	.1	40	106	188	3	35	90	.5	390	-
8	21	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2100
8	22	61	21.0	6.1	8.1	.5	-	-	-	.1	26	118	197	3	94	60	.4	250	-
8	28	61	20.0	8.3	8.3	.5	-	-	-	.1	36	112	198	8	40	125	-	-	550
9	7	61	19.0	7.8	7.4	.7	-	-	-	.0	33	96	182	4	26	70	-	523	550
9	13	61	18.0	7.7	8.1	.6	-	-	-	.1	23	90	146	3	95	80	-	230	2300
9	19	61	16.0	7.6	8.1	.1	-	-	-	.2	20	100	200	2	27	90	-	-	630
9	25	61	13.0	8.3	7.8	.3	-	-	-	.1	20	76	144	6	116	70	-	260	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station near Cedar Hill, New Mexico
Operated by U.S. Geological Survey

STATE New Mexico

MAJOR BASIN Colorado River

MINOR BASIN San Juan River

STATION LOCATION Animas River at Cedar Hill, New Mexico

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	.246	.286	.258	.230	.183	.166	.415	2.200	4.080	.940	.320	.441
2	.240	.280	.249	.220	.189	.166	.415	2.560	3.880	.905	.482	.415
3	.240	.269	.262	.210	.183	.176	.475	2.890	3.260	.863	.837	.403
4	.237	.272	.294	.220	.183	.186	.752	2.860	2.470	.842	.846	.460
5	.231	.276	.262	.230	.183	.194	1.040	2.170	2.360	.849	.747	.467
6	.228	.262	.200	.230	.178	.186	.884	1.660	2.460	.770	.684	.474
7	.228	.298	.225	.230	.183	.186	.912	1.380	2.500	.770	.582	.460
8	.225	.306	.240	.240	.183	.183	.996	1.180	2.770	.764	.536	.428
9	.231	.290	.260	.240	.186	.178	.764	1.040	2.970	.746	.501	.530
10	.280	.272	.260	.240	.191	.199	.722	1.170	2.970	.710	.441	.882
11	.342	.265	.240	.240	.194	.234	.680	1.600	2.920	.638	.397	.837
12	.374	.265	.230	.230	.199	.266	.644	2.350	2.830	.584	.422	.684
13	.346	.265	.245	.230	.194	.269	.698	2.470	2.620	.550	.558	.598
14	.326	.265	.260	.230	.212	.294	.722	1.870	2.320	.520	.428	.515
15	.350	.265	.240	.230	.212	.326	.650	1.500	2.300	.480	.480	.494
16	.456	.262	.225	.235	.212	.354	.614	1.430	2.090	.446	.598	.501
17	.520	.252	.220	.235	.217	.342	.680	1.620	2.010	.438	.614	.454
18	.628	.272	.220	.230	.199	.350	.905	2.060	2.010	.392	.729	.675
19	.446	.276	.230	.230	.191	.350	1.070	3.010	1.880	.374	.693	.801
20	.379	.280	.240	.230	.178	.330	1.270	3.690	1.880	.370	.590	.810
21	.362	.266	.240	.230	.191	.346	1.400	3.210	1.870	.384	.536	.801
22	.346	.266	.240	.220	.199	.322	1.350	3.780	1.690	.397	.522	.774
23	.334	.266	.240	.220	.207	.362	1.470	3.830	1.550	.358	.454	.846
24	.334	.266	.240	.225	.181	.406	1.520	3.690	1.370	.326	.434	.910
25	.330	.255	.240	.215	.178	.433	1.300	3.790	1.320	.318	.454	.819
26	.330	.262	.240	.210	.173	.388	1.040	4.150	1.240	.302	.460	.756
27	.318	.272	.250	.200	.173	.346	.926	4.400	1.150	.290	.434	.693
28	.318	.258	.240	.200	.169	.366	.972	4.460	1.070	.286	.391	.666
29	.318	.252	.240	.195		.428	1.300	4.230	.964	.280	.385	.675
30	.306	.249	.230	.185		.460	1.760	4.080	.948	.314	.385	.630
31	.286		.230	.189		.433		3.860		.340	.441	

665709 O - 62 - 4

RADIOACTIVITY DETERMINATIONS

STATE FLORIDA
MAJOR BASIN SOUTHEAST
MINOR BASIN APALACHICOLA RIVER
STATION LOCATION APALACHICOLA RIVER AT
CHATTAHOOCHEE, FLORIDA 57

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	3	60	10	18	0	0	0	0	0	0									
10	10	60	10	19	-	-	-	0	0	0									
10	18	60	11	2	-	-	-	0	0	0									
11	2	60	11	18	-	-	-	0	0	0									
11	8	60	11	25	-	-	-	0	0	0									
11	21	60	12	2	-	-	-	0	1	1									
11	28	60	12	15	-	-	-	0	0	0									
12	5	60	12	30	0	1	1	0	0	0									
12	19	60	1	10	-	-	-	0	0	0									
1	3	61	1	25	1	1	2	0	0	0									
1	30	61	2	17	-	-	-	0	5	5									
2	20	61	3	7	-	-	-	0	0	0									
2	27	61	3	20	-	-	-	0	0	0									
3	8	61	3	24	1	0	1	0	0	0									
3	13	61	3	29	-	-	-	0	1	1									
3	22	61	4	5	-	-	-	0	0	0									
3	27	61	4	12	0	0	0	0	0	0									
4	17	61*	5	17	0	0	0	0	0	0									
5	29	61*	6	13	1	0	1	0	0	0									
6	26	61*	7	19	0	0	0	0	0	0									
7	31	61*	8	29	0	0	0	0	2	2									
8	29	61*	9	15	0	0	0	0	3	3									
9	6	61	10	3	0	0	0	3	0	3									
9	18	61	10	13	-	-	-	12	8	20									
9	27	61	10	11	-	-	-	1	0	1									

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE FLORIDA
MAJOR BASIN SOUTHEAST
MINOR BASIN APALACHICOLA RIVER
STATION LOCATION APALACHICOLA RIVER AT CHATTAHOOCHEE, FLORIDA 57

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
			TOTAL	BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR		COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	3	60	1300	20	20	330		200	130	400	200	400	70	82	50	57	20	56	10	26	10	10			25			1	----7
10	17	60	1000			200		440	20	180	130	130	70	57	20	56	10	82	10	23	10	50			63				-2---
11	7	60	3600	20		650		50	110	2350	450	600	250	23	30	56	20	82	20	57	10	30	220		111	1			4896-
11	21	60	2900	20	50	350		270	440	1480	330	1100	40	23	20	56	20	57	10	82	10	40	40	20	43				-4977
12	19	60	1600		20	40		180	150	970	180	180	20	82	30	57	20	56	10	27	10	30	20	10	15			1	-4937
2	20	61	5600			180		90	210	4180	960	270	90	57	70	82	10	27	10	56	10	10		10	59				34977
3	8	61	300			40		110		110	70	220	180	56	20	57	10	47	10	92	10	60	20						-----
3	22	61	400					90		220	90	110	70	56	40	27	10	57	10	82	*	30	270		22			2	-----
4	7	61	900			20		330	20	400	130	110	160	57	20	56	20	82	10	28	*	50	110	10	17	1			-1--7
4	17	61	200			70			20	90	20	50	180	56	30	57	20	92	10	58	*	50	20	10	5	2	1		-----
5	3	61	700			80		80	20	460	80	210	80	57	40	56	10	61	10	92	10	30		10	6				----7
5	15	61	1200					130		1010	90	90	50	57	50	82	10	58	10	56	10	20			104	5			--9-7
6	7	61	1600		40	130		350	20	950	60	290	60	57	40	82	20	58	20	56	10	10			48				---37
6	19	61	1500		20	270		60		1100	60	520	60	58	60	56	10	57	10	27	10	10		10	8				4-9-7
7	17	61	300			40		160		90	20	90		57	30	56	30	58	20	27	10	20			3	2			-----
8	7	61	400	20		70		70		180	90	130	20	56	30	58	20	57	20	27	10	20			15				-----
8	21	61	1900	20	20	330		120	20	1060	310	370	150	56	40	58	20	57	20	27	10	20			16				4---7
9	6	61	500			80		210	20	210	20	20		23	30	57	20	82	10	27	10	20			133	3			---3-
9	19	61	800	20	20	60		210	40	330	100	80	20	56	30	58	30	57	30	82	10	20			65	1			---37

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE FLORIDA

MAJOR BASIN SOUTHEAST

MINOR BASIN APALACHICOLA RIVER

STATION LOCATION APALACHICOLA RIVER AT CHATTAHOOCHEE, FLORIDA 57

DATE OF SAMPLE						EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY	GALLONS FILTERED	TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
11	17	60	12	9	5270	115	23	92	0	5	8	1	0	6	1	4	1	0	5
1	4	61	1	25	5340	194	70	124	4	15	20	2	2	16	0	10	6	1	14
2	9	61	3	21	5120	157	51	106	1	11	17	2	1	14	0	7	4	2	9
4	27	61	5	29	5070	162	77	85	2	18	29	4	3	21	1	8	8	1	11
6	26	61	8	2	4650	228	107	121	3	20	26	3	2	19	2	12	11	1	34
8	24	61	9	8	5058	173	74	99	4	17	19	2	1	14	2	9	7	2	16
9	27	61	10	16	4950	182	50	132	1	12	18	2	1	14	1	7	3	1	8

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE FLORIDA
MAJOR BASIN SOUTHEAST
MINOR BASIN APALACHICOLA RIVER
STATION LOCATION APALACHICOLA RIVER AT
CHATTAHOOCHEE, FLORIDA 57

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	32.0	6.1	7.1	-	-	-	-	-	3	34	30	25	5	-	-	80	-
10	10	60	32.0	6.2	7.2	-	-	-	-	-	2	35	30	30	5	-	-	60	150
10	17	60	30.0	7.0	7.3	-	-	-	-	-	4	40	35	35	5	-	-	80	40
10	24	60	28.0	7.0	7.1	.5	-	-	-	-	2	46	44	15	2	-	-	90	7
10	31	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35
11	21	60	30.0	7.2	7.1	-	-	-	-	-	4	48	46	15	2	-	-	80	31
11	28	60	32.0	7.6	7.2	-	-	-	-	-	2	49	45	20	2	-	-	90	110
12	5	60	28.0	7.5	7.5	-	-	-	-	-	2	49	45	20	2	-	-	80	63
12	12	60	28.0	7.1	7.0	-	-	-	-	-	4	46	44	20	2	-	-	90	550
1	2	61	14.0	9.5	7.2	-	-	-	-	-	2	49	45	20	2	-	-	90	59
1	10	61	28.0	9.5	7.4	-	-	-	-	-	4	48	46	20	2	-	-	80	-
1	24	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
1	30	61	14.0	11.2	7.4	-	-	-	-	-	11	40	32	20	2	-	-	90	290
2	8	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
2	13	61	16.0	10.0	7.2	-	-	-	-	-	11	40	31	25	5	-	-	96	14
2	20	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*10
2	28	61	28.0	10.0	7.0	-	-	-	-	-	10	44	35	30	5	-	-	86	80
3	8	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8500
3	14	61	20.0	11.2	7.4	-	-	-	-	-	10	42	35	30	5	-	-	90	17
3	20	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
3	27	61	20.0	9.0	7.4	-	-	-	-	-	11	42	35	35	5	-	-	80	46
4	3	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140
4	17	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44
4	24	61	22.0	9.6	7.1	-	-	-	-	-	2	49	45	20	2	-	-	76	250
5	1	61	24.0	9.7	7.6	-	-	-	-	-	4	48	46	15	2	-	-	86	710
5	8	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	91
5	15	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*30
5	22	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
5	29	61	25.0	8.9	7.2	-	-	-	-	-	10	44	52	20	5	-	-	86	35
6	5	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	480
6	12	61	26.0	9.0	7.1	-	-	-	-	-	4	40	55	20	5	-	-	60	-
6	17	61	28.0	6.5	7.4	-	-	-	-	-	16	42	44	60	20	-	-	80	-
6	19	61	28.0	9.1	7.4	-	-	-	-	-	2	40	50	15	2	-	-	70	660
7	10	61	28.0	9.0	7.1	-	-	-	-	-	11	38	44	10	15	-	-	80	120
7	31	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4000
8	15	61	30.0	6.8	7.2	-	-	-	-	-	30	42	40	40	10	-	-	90	*100
8	21	61	30.0	6.4	7.1	-	-	-	-	-	16	40	34	50	20	-	-	90	*100

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Chattahoochee, Florida
Operated by U.S. Geological Survey

STATE Florida

MAJOR BASIN Southeast

MINOR BASIN Apalachicola River

STATION LOCATION Apalachicola River at Chattahoochee, Florida

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	19.300	9.660	10.300	13.500	13.000	125.000	46.400	40.100	24.700	27.000	12.500	24.200
2	19.100	9.430	10.800	13.500	13.400	134.000	64.100	41.600	23.500	24.200	12.300	22.100
3	18.700	9.270	10.800	11.800	12.800	134.000	75.600	43.100	19.900	20.200	12.400	19.800
4	18.900	10.100	10.800	11.400	15.300	113.000	84.900	43.000	18.000	20.000	12.700	18.100
5	19.100	11.200	10.800	11.000	14.400	68.400	78.800	42.400	16.900	19.100	12.900	14.500
6	19.200	9.100	11.400	11.500	13.700	58.400	59.800	37.100	14.700	18.000	12.300	17.000
7	19.000	8.970	10.100	12.300	14.300	53.600	53.200	33.400	14.700	18.000	12.800	17.900
8	16.400	9.020	10.000	13.600	14.500	50.500	51.600	32.900	19.800	19.100	13.500	16.200
9	13.400	10.500	10.500	13.100	15.000	47.900	51.600	33.700	17.200	19.000	13.500	15.500
10	12.900	10.100	11.600	11.100	15.600	45.000	48.400	33.300	13.000	17.000	14.300	19.000
11	12.600	10.600	12.400	10.900	15.000	43.600	42.900	29.100	11.800	16.200	16.600	16.400
12	12.700	8.970	12.500	10.900	13.100	37.500	48.100	28.200	11.700	16.200	19.100	12.900
13	12.700	9.590	12.500	10.900	13.400	32.300	57.300	27.400	11.800	19.500	19.500	11.800
14	12.800	8.970	11.500	11.500	13.000	33.200	61.000	29.700	12.800	24.000	19.100	12.300
15	12.500	8.900	11.800	12.400	13.000	33.600	65.200	27.900	14.600	34.800	17.000	13.800
16	12.600	10.500	12.100	11.400	12.200	33.200	79.000	27.700	14.600	28.800	16.700	13.900
17	12.400	11.200	12.200	11.900	12.000	31.800	82.000	27.900	14.600	25.100	16.600	11.800
18	11.600	9.360	12.800	12.100	11.400	33.800	81.800	27.600	14.500	22.800	15.200	13.600
19	10.900	11.100	12.500	12.500	11.500	33.200	74.500	24.000	15.600	21.100	14.000	14.100
20	10.900	9.880	12.000	12.500	22.600	33.900	67.000	20.500	18.900	20.800	13.100	12.100
21	10.900	10.500	12.000	12.400	44.500	32.000	59.000	20.700	24.400	21.200	12.300	11.500
22	10.800	13.100	12.000	12.300	59.100	30.400	53.800	18.800	21.100	26.100	12.200	11.300
23	10.800	9.860	12.400	12.800	67.400	30.700	49.400	14.100	26.700	22.900	12.400	11.100
24	10.700	9.070	12.600	12.900	75.200	28.800	45.400	15.000	30.100	19.900	13.000	10.800
25	10.800	9.920	13.000	13.200	79.500	27.100	40.800	19.200	30.400	17.800	17.500	10.700
26	11.000	9.900	13.200	14.400	93.400	25.700	37.700	28.100	27.800	17.300	18.200	10.700
27	9.410	10.300	12.100	14.600	101.000	20.800	36.000	34.600	27.000	16.400	20.200	10.800
28	9.220	12.400	9.630	15.400	119.000	20.400	40.600	34.500	28.300	15.000	32.200	10.700
29	9.220	12.100	9.650	17.700		24.200	39.400	31.500	30.800	14.800	21.700	9.430
30	9.120	11.300	10.900	14.700		25.500	39.400	24.000	31.100	14.600	22.400	8.850
31	9.150		12.600	13.100		29.100		21.800		13.600	25.500	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE ARKANSAS

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN ARKANSAS RIVER-VAN BUREN TO MOUTH

STATION LOCATION ARKANSAS RIVER AT

PENDLETON FERRY, ARKANSAS 52

DATE SAMPLE TAKEN			DATE OF DETERMI-NATION		RADIOACTIVITY IN WATER						RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
					ALPHA			BETA			DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	17	60*	11	21	7	2	9	1	20	21							
11	7	60*	12	30	20	4	24	100	0	100							
1	23	61*	2	21	1	1	2	0	0	0							
3	27	61	4	13	1	0	1	0	0	0							
4	24	61*	5	11	1	0	1	0	0	0							
7	31	61*	8	29	14	4	18	23	1	24							
8	28	61*	9	18	0	0	0	52	17	69							
9	18	61	11	8	-	-	-	69	0	69							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE ARKANSAS
MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER
MINOR BASIN ARKANSAS RIVER-VAN BUREN TO MOUTH
STATION LOCATION ARKANSAS RIVER AT
PENDLETON FERRY, ARKANSAS 52

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS														PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE							
10	3	60	2300	20		310		840	160	440	510	330	130	26	40	68	10	65	10	66	10	40	350	10	1		1		4277-
11	1	60	300			20		90		160		20	20										20						-----
1	9	61	600			50		90	20	290	160	90	130	56	40	58	20	57	10	82	10	40	130		3		1		--9--
1	23	61	20400			20	20	780	40	19150	430	1590	180	82	80	56	10	80	10	58	*	10							71933
2	6	61	33700					870	20	32660	130	1940	90	82	90	56	*						110		3		1		-1937
2	20	61	2600			20		110		2280	180	690	40	82	50	83	10	92	10	56	10	30	20		140				--9--
3	6	61	1400			110		270	20	360	670	180	600	56	10	92	10	58	10	86	10	50							-197-
3	27	61	18200			640		640		16300	1220	1310	290	82	70	56	20	4	*	58	*	10	40	10	5				7-933
4	10	61	400			20				250	110	40	180	70	10	86	10	26	10	57	10	70							-----
4	24	61	600			110		110	20	200	130	290	490																-----
7	10	61	2400		20	290		940		690	490	650	180	26	50	80	20	59	20	58	10	10							4196-
8	15	61	1500	20	40	200		160	20	1010	90	580	20	58	60	26	40	29	*	56	*	*	20						4---7
8	21	61	600							510	50	400	160	26	40	58	40	92	10	75	*	10							4----
8	26	61	400			60		100		230	40	40	60	26	40	58	30	71	*	55	*	30							4----
9	5	61	500			60		20		270	150	80	150	73	20	26	20	58	10	71	*	60			1				-4---
9	18	61	300			70		50		130	40	130	90										20						-----

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE ARKANSAS

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN ARKANSAS RIVER VAN BUREN TO MOUTH

STATION LOCATION ARKANSAS RIVER AT PENDLETON FERRY, ARKANSAS 52

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	25.0	7.7	7.7	-	15	2.0	6.1	-	240	130	288	-	-	48	.5	548	-
10	10	60	23.0	8.9	8.1	-	23	1.5	4.8	-	203	140	245	-	-	54	.6	705	-
11	1	60	16.0	8.3	7.9	1.7	91	2.2	6.9	-	265	100	281	-	-	88	.5	753	-
11	7	60	10.0	9.2	7.8	-	119	1.7	6.6	-	198	170	434	40	840	64	.4	-	-
1	9	61	6.0	11.6	7.2	3.1	-	3.2	8.2	-	132	56	122	45	84	26	.2	438	-
1	16	61	5.6	12.1	7.3	4.3	42	2.0	5.7	-	138	64	140	40	90	24	.3	441	8600
1	23	61	4.0	13.0	7.5	4.1	27	2.4	6.7	-	149	64	148	35	106	29	.1	460	12000
1	30	61	1.0	14.8	7.6	7.9	22	1.9	6.8	-	150	68	182	40	88	32	.0	457	-
2	6	61	4.0	13.3	7.7	6.1	23	1.6	6.9	-	195	6	150	45	62	39	.2	636	4800
2	13	61	11.0	12.6	8.4	-	26	2.8	8.9	-	178	96	166	45	86	46	.1	575	1800
2	20	61	11.0	9.4	7.4	3.8	18	2.8	6.9	-	146	88	134	45	103	44	.3	486	8200
2	27	61	10.0	10.1	7.5	3.5	37	2.6	8.9	-	126	64	110	80	216	26	.2	-	1300
3	6	61	15.0	9.5	7.7	2.2	26	2.9	6.9	-	75	76	112	75	192	21	.1	259	11000
3	13	61	13.0	9.3	7.7	2.1	30	2.1	6.9	-	71	52	102	45	180	19	.0	307	7600
3	27	61	-	10.3	8.0	3.2	-	1.1	6.9	-	85	56	88	30	98	34	.1	241	6500
4	10	61	14.0	9.0	7.2	1.7	32	1.5	6.1	-	60	128	102	45	344	30	-	274	2800
7	10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1800
7	31	61	30.0	5.1	7.2	2.0	36	1.8	6.5	.0	62	68	131	40	392	30	.0	282	13000
8	7	61	30.0	5.0	6.8	1.9	23	2.6	9.0	.0	46	102	138	50	400	29	.0	209	-
8	15	61	28.0	7.8	7.2	6.7	19	3.1	9.3	.1	123	124	196	40	120	46	.1	407	2800
8	21	61	28.0	6.1	6.4	3.5	42	2.9	10.6	.0	70	136	142	30	324	-	.0	324	3200
8	28	61	29.0	7.4	6.7	1.8	26	-	-	.0	64	76	114	45	294	-	.0	272	11000
9	5	61	29.0	5.3	7.7	2.9	34	-	-	.0	233	112	184	80	312	-	.0	751	16000
9	18	61	22.0	7.4	7.6	4.4	25	1.3	8.0	.0	98	94	170	100	420	38	.0	383	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Little Rock, Arkansas
Operated by U.S. Geological Survey

STATE: Arkansas

MAJOR BASIN: Southwest-Lower Mississippi River

MINOR BASIN: Arkansas River, Van Buren to Mouth

STATION LOCATION: Arkansas River at Pendleton Ferry, Arkansas

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	8.810	16.300	8.310	20.900	9.620	53.500	148.000	28.100	142.000	16.200	69.100	31.200
2	9.890	16.800	7.830	23.300	8.560	51.900	182.000	33.500	140.000	15.800	58.900	27.600
3	9.890	23.900	8.060	23.900	7.830	46.800	169.000	34.900	136.000	15.800	50.900	24.600
4	9.890	38.400	8.810	24.500	8.060	41.200	151.000	30.000	125.000	18.800	44.400	22.300
5	10.800	42.600	8.810	23.300	8.810	37.700	132.000	37.700	111.000	21.300	37.400	21.300
6	11.400	41.900	10.200	23.900	8.810	38.400	114.000	131.000	94.000	21.300	32.500	19.800
7	10.500	41.900	16.800	24.500	8.810	52.700	95.800	236.000	84.000	19.800	28.800	17.900
8	9.890	41.900	32.800	23.900	9.350	67.300	85.300	234.000	80.000	17.400	25.800	20.800
9	9.890	38.400	28.100	21.500	9.620	72.700	82.600	203.000	80.000	15.400	22.800	51.700
10	9.350	34.900	26.900	19.300	10.500	71.800	85.300	214.000	88.300	15.800	19.300	63.700
11	9.350	31.400	30.700	17.800	10.800	67.300	84.400	247.000	84.400	15.000	17.400	58.900
12	8.810	28.700	53.500	15.400	11.800	60.100	77.200	275.000	81.700	16.200	17.400	51.700
13	7.830	24.500	59.200	14.000	12.400	58.300	72.700	285.000	74.500	24.000	16.600	43.700
14	7.180	19.800	58.300	14.500	13.200	60.100	72.700	267.000	70.900	28.200	16.200	36.700
15	6.980	17.300	58.300	15.000	13.600	55.100	72.700	240.000	68.200	27.000	15.800	33.200
16	7.390	15.000	60.100	15.400	13.200	49.600	75.400	224.000	56.700	31.200	19.300	42.300
17	7.390	16.300	56.700	15.400	12.800	46.100	78.100	215.000	48.900	71.000	21.300	108.000
18	6.780	16.300	50.300	15.800	12.400	43.300	75.400	214.000	60.100	135.000	36.700	160.000
19	6.590	15.800	44.700	15.400	14.000	40.500	68.200	214.000	76.300	147.000	77.000	148.000
20	6.400	15.000	41.900	15.800	20.300	37.700	60.100	220.000	66.400	126.000	87.700	131.000
21	6.050	12.800	41.200	15.800	27.500	37.000	53.500	224.000	49.600	120.000	83.300	131.000
22	6.590	12.800	39.100	15.000	36.300	39.100	48.200	206.000	41.900	115.000	64.600	130.000
23	8.310	12.400	35.600	14.000	41.900	39.100	44.700	184.000	40.500	101.000	47.900	122.000
24	15.000	10.500	30.700	12.800	44.700	39.800	41.200	169.000	36.300	83.300	37.400	110.000
25	19.800	9.350	26.900	11.800	44.700	39.800	37.700	154.000	30.700	75.000	29.400	101.000
26	19.300	9.890	23.300	10.500	44.700	41.200	37.700	153.000	26.300	89.900	24.600	91.000
27	22.100	10.200	19.800	9.890	46.100	51.900	40.500	159.000	22.700	108.000	22.800	83.300
28	24.500	9.890	17.800	10.200	51.100	71.800	37.700	160.000	18.800	101.000	30.000	75.000
29	23.300	8.810	16.300	10.500		84.400	32.100	149.000	15.800	91.000	36.700	63.700
30	19.800	8.810	16.300	10.500		85.300	27.500	144.000	15.000	86.600	34.600	61.300
31	17.800		17.800	10.200		99.400		144.000		79.000	33.200	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE OKLAHOMA

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN ARK. RIVER, KANS-COLO LINE TO TULSA

STATION LOCATION ARKANSAS RIVER NEAR PONCA CITY, OKLAHOMA 1

DATE SAMPLE TAKEN			DATE OF DETERMINATION		RADIOACTIVITY IN WATER							RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
					ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	24	60*	11	1	7	3	10	0	0	0									
11	28	60*	12	9	1	5	6	0	0	0									
12	27	60*	1	12	3	8	11	0	0	0									
1	30	61*	2	13	0	0	0	8	0	8									
2	27	61*	3	7	8	4	12	0	0	0									
3	27	61*	4	6	1	5	6	38	0	38									
4	24	61*	5	4	10	2	12	0	0	0									
5	29	61*	6	6	15	1	16	0	0	0									
6	26	61*	7	13	5	4	9	0	12	12									
7	31	61*	8	23	7	7	14	22	0	22									
8	28	61*	9	15	11	1	12	34	15	49									
9	5	61	10	5	-	-	-	0	0	0									
9	11	61	10	5	-	-	-	21	21	42									
9	18	61	10	16	-	-	-	12	25	37									
9	25	61	10	2	5	8	13	39	36	75									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE OKLAHOMA

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN ARK. RIVER, KANS-COLO LINE TO TULSA

STATION LOCATION ARKANSAS RIVER NEAR

PONCA CITY, OKLAHOMA 1

DATE OF SAMPLE: MONTH	DAY	YEAR	ALGAE (Number per ml.): TOTAL	BLUE-GREEN: COCCOID	BLUE-GREEN: FILAMENTOUS	GREEN: COCCOID	GREEN: FILAMENTOUS	FLAGELLATES (Pigmented): GREEN	FLAGELLATES (Pigmented): OTHER	DIATOMS: CENTRIC	DIATOMS: PENNATE	INERT DIATOM SHELLS (No. per ml.): CENTRIC	INERT DIATOM SHELLS: PENNATE	DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*): FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE	OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES: PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	DOMINANT GENERA (See Introduction for Identification)
10	5	60	29200	50		1370		620		26180	930	800	570	26	50	82	30	65	10	66	*	20	270	20					48932
10	17	60	500					50		240	200	40	1860																--9-3
11	6	60	4700	20		270		230	70	1450	2680	200	650	26	20	65	10	5	10	71	10	60	220	10					4-767
11	21	60	16500	110	20	510		1760	20	4030	10080	260	590	70	40	67	20	65	10	4	*	30	70						41767
12	5	60	10000			20		650	290	5230	3820	600	1120	4	50	70	10	85	10	82	10	20	50		2	1	8		4-963
12	19	60	2000		20	20		260	20	260	1340	150	770	70	20	4	10	82	10	26	10	50	70		1		3		41763
1	3	61	1300			20		160		560	600	160	780	85	30	4	10	26	10	70	10	60	70				1		4--33
1	16	61	2700					540		1050	1070	270	760	70	20	85	20	82	10	4	10	40					14		4-933
2	6	61	2500			20		1140		560	800	70	1120	51	20	85	20	86	10	70	10	40	20	10			15		45933
2	20	61	11700					1360	160	110	10100	110	2080	70	20	86	10	51	10	4	*	60	50						71763
3	6	61	23600			380		5810		14790	2610	720	1790	4	10	82	10	85	10	86	10	50			1		4		41933
3	20	61	94500	70		1320		3920	70	78410	10700	5180	4780	70	40	82	40	67	10	4	*	10	50						81965
4	3	61	2700	20		160		600		630	1340	310	1070	70	10	86	10	65	10	82	10	60							81963
4	17	61	2700	20		160	20	600		380	1540	130	2460	51	10	86	10	85	10	71	10	70				1	1		45733
5	1	61	600			20		20		180	410	50	560																--96-
5	15	61	5300			770		460	20	2730	1330	170	480	85	10	71	10	92	10	72	10	60			3	2	1	1	41965
6	5	61	112800		100	7600		1860	20	96630	6580	13090	1510	23	30	26	20	82	10	84	10	30			704	2	1		41913
6	19	61	9500	40		2420		850		5980	170	700	950	12	30	85	10	92	10	58	10	50							48927
7	3	61	18600		60	3330	90	310	170	10310	4350	9030	1060	26	70	59	20	23	*	58	*	10							48767
7	17	61	46600	20	20	5200	20	200		25910	15210	12580	3200	26	90	5	*	67	*				50		52		2		48763
8	7	61	29100	60	150	4250		310		16150	8220	5260	1330	23	40	26	40	82	*	70	*	20			81	2			48963
8	21	61	500			40	20	40		210	150		40	73	20	85	10	55	10	92	10	70							-4---
9	5	61	19700	180		4200		2370	70	10410	2590	3800	1100	26	20	73	10	46	10	65	10	60		10	9	2	1		48163
9	18	61	1200		20	40		60		310	790		210																4-76-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE OKLAHOMA
MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER
MINOR BASIN ARK. RIVER, KANS-COLO LINE TO TULSA
STATION LOCATION ARKANSAS RIVER NEAR
PONCA CITY, OKLAHOMA

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	21.0	-	7.9	-	-	-	-	-	351	150	231	10	200	93	.7	659	-
10	10	60	21.0	-	8.3	-	-	-	-	-	555	150	282	10	250	132	.6	930	-
10	17	60	18.0	-	7.9	-	-	-	-	-	145	100	126	15	500	43	.3	310	-
10	24	60	17.0	-	7.9	-	-	-	-	-	350	154	265	10	500	101	.4	669	-
10	31	60	11.0	-	7.9	-	-	-	-	-	384	140	239	20	800	100	.5	656	-
11	7	60	9.0	-	8.2	-	-	-	-	-	350	156	248	20	175	100	.6	608	-
11	14	60	14.4	-	8.2	-	-	-	-	-	479	204	337	15	44	155	.2	692	-
11	21	60	9.0	-	8.2	-	-	-	-	-	572	230	359	15	40	165	.1	978	-
11	28	60	9.0	-	8.3	-	-	-	-	-	581	220	376	15	40	175	1.0	1024	-
12	5	60	9.0	-	8.1	-	-	-	-	-	547	220	393	15	50	175	1.0	1020	-
12	12	60	4.0	-	7.9	-	-	-	-	-	521	210	367	15	80	158	1.0	960	-
12	19	60	-	-	-	-	-	-	-	-	-	-	-	-	-	150	.7	649	-
12	21	60	1.0	-	8.2	-	-	-	-	-	456	204	325	20	118	-	-	-	-
12	27	60	3.0	-	8.2	-	-	-	-	-	571	220	330	20	60	157	.9	996	-
1	3	61	1.0	-	7.9	-	-	-	-	-	572	230	384	20	60	205	1.0	1070	-
1	9	61	1.5	-	7.9	-	-	-	-	-	589	226	401	20	40	190	.8	1102	-
1	16	61	2.0	-	7.9	-	-	-	-	-	624	220	401	5	25	170	1.0	1110	-
1	23	61	1.0	-	8.2	-	-	-	-	-	648	236	412	10	27	203	1.0	1170	-
1	30	61	2.0	-	8.2	-	-	-	-	-	855	252	533	20	27	195	1.2	1430	-
2	6	61	-	-	7.2	-	-	-	-	-	321	218	376	0	28	175	1.3	1073	-
2	13	61	9.0	-	8.2	-	-	-	-	-	573	220	410	20	42	185	1.3	1046	-
2	20	61	5.0	-	8.1	-	-	-	-	-	467	202	393	30	950	193	.7	930	-
2	27	61	6.5	-	8.1	-	-	-	-	-	451	200	327	30	675	175	.7	963	-
3	6	61	10.0	-	8.3	-	-	-	-	-	520	170	342	20	65	165	.5	1011	-
3	13	61	8.5	-	8.4	-	-	-	-	-	574	216	401	20	46	180	.9	1070	-
3	20	61	5.0	-	8.4	-	-	-	-	-	564	200	384	10	92	180	.9	1034	-
3	27	61	12.5	-	8.0	-	-	-	-	-	330	166	270	20	170	118	.7	700	-
4	3	61	12.0	-	7.9	-	-	-	-	-	290	174	256	20	350	108	.3	589	-
4	10	61	9.5	-	7.9	-	-	-	-	-	273	190	273	20	550	60	.1	626	-
4	17	61	10.0	-	7.9	-	-	-	-	-	316	170	270	25	135	65	.4	658	-
4	24	61	21.0	-	7.9	-	-	-	-	-	393	200	316	20	110	125	.5	760	-
5	1	61	16.0	-	7.9	-	-	-	-	-	247	134	227	20	700	70	.1	565	-
5	8	61	18.0	-	7.7	-	-	-	-	-	39	100	85	15	700	-	-	-	-
5	10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	40	.1	250	-
5	15	61	16.0	-	7.9	-	-	-	-	-	342	200	316	20	200	90	.3	688	-
5	22	61	20.0	-	8.1	-	-	-	-	-	301	186	323	20	800	-	-	-	-
5	29	61	21.0	-	8.4	-	-	-	-	-	325	196	300	20	275	-	-	-	-
6	5	61	23.0	-	8.4	-	-	-	-	-	360	184	251	15	175	125	.5	882	-
6	12	61	27.0	-	8.2	-	-	-	-	-	304	178	255	20	330	95	.2	620	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE OKLAHOMA

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN ARK. RIVER, KANS-COLO LINE TO TULSA

STATION LOCATION ARKANSAS RIVER NEAR
PONCA CITY, OKLAHOMA

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
6	19	61	24.0	-	8.1	-	-	-	-	-	257	148	214	30	520	80	.3	559	-
6	26	61	24.5	-	8.4	-	-	-	-	-	440	190	281	25	370	-	-	-	-
7	3	61	26.5	-	8.4	-	-	-	-	-	525	194	322	15	115	-	-	-	-
7	10	61	25.0	-	8.4	-	-	-	-	-	338	152	312	20	380	125	.3	706	-
7	17	61	26.5	-	8.4	-	-	-	-	-	502	164	290	20	110	155	.3	892	-
7	24	61	25.0	-	7.7	-	-	-	-	-	50	88	94	40	1700	26	.1	188	-
7	31	61	24.5	-	8.1	-	-	-	-	-	274	190	274	10	380	70	.3	568	-
8	7	61	27.0	-	8.4	-	-	-	-	-	470	212	310	20	120	125	.6	849	-
8	14	61	24.0	-	7.9	-	-	-	-	-	218	118	160	30	1400	44	.1	397	-
8	21	61	24.0	-	7.9	-	-	-	-	-	89	94	140	40	1700	25	.1	213	-
8	28	61	25.0	-	7.9	-	-	-	-	-	213	154	188	30	300	68	.5	504	-
9	5	61	20.0	-	8.4	-	-	-	-	-	376	188	273	10	175	108	.8	731	-
9	11	61	26.0	-	8.4	-	-	-	-	-	290	160	239	25	460	98	.7	568	-
9	18	61	18.0	-	7.9	-	-	-	-	-	116	124	133	20	700	45	.0	291	-
9	25	61	16.5	-	8.4	-	-	-	-	-	234	190	260	20	410	75	.5	522	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Ralston, Oklahoma
Operated by U.S. Geological Survey

STATE: Oklahoma

MAJOR BASIN: Southwest-Lower Mississippi River

MINOR BASIN: Ark. River, Kans-Colo Line to Tulsa

STATION LOCATION: Arkansas River near Ponca City, Oklahoma

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	3.500	12.800	1.950	2.120	1.950	2.280	9.000	5.910	4.780	2.900	4.520	4.520
2	2.800	19.100	2.030	2.030	1.880	2.200	7.800	22.900	4.830	2.710	4.100	4.100
3	2.280	12.600	1.920	2.030	1.880	2.120	8.200	17.300	7.730	2.540	3.700	3.800
4	1.950	7.750	1.900	1.950	1.850	2.120	7.300	15.000	7.300	2.450	3.500	3.900
5	1.740	5.650	1.800	1.950	1.770	2.250	6.060	19.300	7.000	2.360	3.000	3.700
6	1.560	4.520	1.750	1.920	1.720	4.300	5.150	48.900	6.460	2.280	2.710	3.800
7	1.430	4.000	1.750	1.870	1.640	2.450	4.520	115.000	8.350	3.220	2.540	5.150
8	1.320	3.600	1.850	1.870	1.560	2.200	4.100	153.000	6.860	3.200	2.280	4.780
9	1.260	3.300	1.920	1.870	1.480	2.030	4.300	139.000	12.100	4.400	2.120	6.320
10	1.220	3.000	2.030	1.850	1.400	2.030	5.920	64.400	11.800	4.000	2.280	5.400
11	1.150	2.800	2.450	1.830	1.460	2.030	9.200	25.500	8.350	2.800	2.360	4.100
12	1.090	2.620	2.620	1.800	1.540	1.950	12.200	21.600	7.000	2.540	2.200	3.800
13	1.110	2.540	3.060	1.780	1.620	1.870	11.400	16.900	6.060	3.400	3.450	35.400
14	1.120	2.450	5.360	1.750	1.690	1.820	9.550	13.400	8.720	6.320	13.700	105.000
15	1.180	2.360	5.900	1.720	1.700	1.750	8.050	11.400	6.730	7.000	17.100	73.100
16	4.480	2.280	4.280	1.700	1.780	1.720	6.860	9.900	9.560	7.750	16.400	42.500
17	6.850	2.200	3.400	1.670	1.880	1.830	5.650	9.200	11.400	5.920	9.200	29.800
18	5.400	2.200	3.000	1.660	1.950	1.950	5.020	7.900	9.200	4.650	7.000	17.900
19	4.780	2.200	2.710	1.660	2.200	1.950	4.520	7.300	7.150	4.000	5.780	11.800
20	5.280	2.120	2.620	1.640	2.360	1.950	4.200	7.000	6.190	3.500	5.280	10.200
21	6.190	2.120	2.540	1.640	6.370	2.360	4.000	9.090	5.780	3.600	11.300	9.200
22	5.400	2.030	2.360	1.640	6.180	3.400	3.800	15.600	5.650	5.280	13.000	16.100
23	4.300	1.950	2.360	1.600	4.200	4.520	3.900	24.000	5.150	14.800	14.600	15.300
24	3.600	1.920	2.120	1.560	3.400	5.780	4.780	18.300	4.650	28.200	17.800	9.900
25	3.100	1.880	2.120	1.500	3.000	5.780	5.400	14.600	4.300	33.500	17.300	7.600
26	2.710	1.870	1.950	1.400	2.800	4.900	5.280	13.000	3.900	29.900	11.800	8.350
27	2.690	1.870	1.950	1.500	2.620	4.400	4.520	9.740	3.700	23.000	8.500	14.000
28	11.000	1.820	1.950	1.600	2.450	3.900	4.000	7.450	3.500	11.800	7.300	12.300
29	10.500	1.750	2.120	1.700		14.500	3.600	6.730	3.300	7.600	6.460	10.200
30	8.200	1.800	2.120	1.700		17.800	3.500	6.060	3.100	6.190	5.780	8.850
31	7.750		2.120	1.800		13.100		5.280		5.280	5.020	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE KANSAS

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN ARK. RIVER, KANS-COLO LINE TO TULSA

STATION LOCATION ARKANSAS RIVER AT

COOLIDGE, KANSAS 2

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	24	60*	11	3	3	63	66	0	0	0							
11	28	60*	12	5	3	60	63	0	0	0							
1	31	61*	2	9	1	31	32	0	0	0							
2	28	61*	3	9	3	74	77	0	0	0							
3	27	61*	4	4	0	49	49	0	0	0							
4	24	61*	5	15	8	80	88	0	3	3							
5	29	61*	6	6	3	25	28	0	0	0							
6	26	61*	7	13	0	46	46	17	3	70							
7	31	61*	8	14	80	35	115	52	0	52							
8	29	61*	9	14	22	16	38	141	4	145							
9	5	61	9	28	0	6	6	0	16	16							
9	11	61	10	23	-	-	-	9	57	66							
9	18	61	10	14	-	-	-	36	59	95							
9	25	61	11	8	-	-	-	67	48	115							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE KANSAS

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN ARK. RIVER, KANS-COLO LINE TO TULSA

STATION LOCATION ARKANSAS RIVER AT COOLIDGE, KANSAS

2

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
			TOTAL	BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS														PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
MONTH	DAY	YEAR		COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE							
10	17	60	1500				20				1430	20	1160	70	60	9	10	69	10	2	10	20	50		9	1		1	---63
11	8	60	1100			20		20			1030	20	1940	87	10	11	10	75	10	69	10	60	250					1	--763
11	21	60	2300		20			20	20	110	2160	40	510	4	10	65	10	71	10	67	10	60	110						--763
12	2	60	1100				50				1050	20	870	12	10	87	10	4	10	5	10	60	20		1				---63
12	19	60	900		20		20				890	20	1030	4	10	71	10	65	10	66	10	60	90						--76-
1	23	61	700								670		1320	92	10	4	10	85	10	75	10	60	20						------
1	31	61	900			20					870	20	1360	4	10	92	10	12	10	71	10	60	20				3		--76-
2	20	61	1100							70	980		920	4	10	92	10	86	10	71	10	60	20						---63
3	6	61	3100								3130	20	1740	4	40	71	20	86	10	92	*	30	20						7-773
3	27	61	2900		20			20			2860		1900	4	30	71	20	65	10	86	10	40							--763
4	11	61	3800								3800	70	3020																75763
5	1	61	300								310	20	870	92	20	87	10	11	10	71	10	60	20						------
5	15	61	8300			20		20		150	8090		330	71	50	4	20	75	10	70	10	20			1			3	7-763
6	1	61	4700		20	60				170	4430		810	92	60	75	20	5	10	4	*	10			56	11	1		--773
6	21	61	4200			600				1140	2440	200	2010	75	20	5	10	87	10	92	10	50							74763
7	6	61	3200			230		480		520	2010	20	830	5	20	75	10	65	10	92	10	50							74733
7	17	61												5	90	75	10	69	*										------
8	2	61	5500					40		250	5220	20	660	5	90	75	10	71	*						4				4---3
8	21	61									40			71	20	75	10	11	10	55	10	60							------
9	5	61	5300			80				190	5050		20	67	20	70	10	75	10	65	10	50							--763
9	19	61	5300		20	270		90		180	4780	20	1790	75	80	5	10	12	*	87	*	10			27			1	48-63

665709 O - 62 - 5

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE KANSAS

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN ARK. RIVER, KANS-COLO LINE TO TULSA

STATION LOCATION ARKANSAS RIVER AT COOLIDGE, KANSAS

2

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	19.0	-	8.2	-	-	-	-	-	198	170	1660	5	5	2225	.1	4090	-
10	10	60	17.5	-	8.2	-	-	-	-	-	199	168	1620	5	5	2050	.0	4110	-
10	17	60	12.0	-	8.2	-	-	-	-	-	190	170	1650	5	5	1930	.0	4080	-
10	24	60	-	-	7.7	-	-	-	-	-	144	200	1480	5	900	2000	.0	3750	-
11	1	60	6.0	-	8.2	-	-	-	-	-	150	218	1660	5	270	2300	.0	3820	-
11	8	60	7.0	-	8.1	-	-	-	-	-	162	216	1650	10	170	2380	.0	3720	-
11	21	60	4.0	-	8.1	-	-	-	-	-	161	216	1760	5	5	2380	.0	3990	-
11	28	60	-	-	8.1	-	-	-	-	-	159	220	1750	5	250	2380	.0	4130	-
1	4	61	-	-	7.7	-	-	-	-	-	164	232	1740	0	50	2500	.0	4110	-
1	9	61	-	-	7.8	-	-	-	-	-	154	214	1700	0	85	2275	.1	3980	-
1	16	61	-	-	7.8	-	-	-	-	-	152	212	1630	0	160	2280	.0	3920	-
1	23	61	.0	-	7.7	-	-	-	-	-	153	218	1680	0	125	2250	.1	3970	-
1	31	61	-	-	7.8	-	-	-	-	-	153	220	1670	0	122	2200	.0	3980	-
2	7	61	-	-	7.8	-	-	-	-	-	139	226	1610	0	156	2500	.0	3785	-
2	20	61	-	-	-	-	-	-	-	-	144	232	1660	5	95	2650	.0	4039	-
2	22	61	-	-	7.6	-	-	-	-	-	158	206	1670	0	-	2150	.0	4076	-
2	28	61	-	-	7.7	-	-	-	-	-	158	228	1710	0	170	2650	.0	4040	-
3	6	61	-	-	7.6	-	-	-	-	-	156	206	1670	0	-	2250	.0	4014	-
3	14	61	-	-	7.4	-	-	-	-	-	149	194	1640	0	-	2150	.0	4004	-
3	27	61	-	-	7.7	-	-	-	-	-	153	192	1660	0	60	2250	.0	4055	-
4	6	61	-	-	7.5	-	-	-	-	-	143	202	1640	10	-	2100	.0	3900	-
4	10	61	-	-	7.4	-	-	-	-	-	122	202	1540	5	-	1875	.1	3453	-
4	17	61	-	-	7.7	-	-	-	-	-	117	196	1510	5	0	1575	.0	3330	-
4	24	61	-	-	7.4	-	-	-	-	-	106	192	1480	7	0	1575	.0	3268	-
5	1	61	-	-	8.0	-	-	-	-	-	139	204	1408	5	-	1950	.0	3565	-
5	8	61	-	-	7.8	-	-	-	-	-	162	196	1612	5	-	2200	.0	3969	-
5	15	61	-	-	7.9	-	-	-	-	-	186	200	1736	5	-	2450	.0	4312	-
6	1	61	-	-	7.2	-	-	-	-	-	141	164	1704	0	0	2475	.2	4122	-
6	5	61	-	-	7.4	-	-	-	-	-	42	172	540	20	1500	600	.1	1114	-
6	12	61	-	-	7.3	-	-	-	-	-	135	200	1496	0	570	2250	.0	3650	-
6	21	61	-	-	7.3	-	-	-	-	-	152	186	1648	5	115	2475	.0	3963	-
7	17	61	-	-	7.9	-	-	-	-	-	66	212	1032	15	5000	1238	.1	2192	-
7	24	61	-	-	8.1	-	-	-	-	-	166	182	1600	5	130	2400	.1	3890	-
7	31	61	-	-	8.1	-	-	-	-	-	175	162	1520	5	0	2400	.0	3757	-
8	7	61	-	-	7.9	-	-	-	-	-	181	176	1600	5	0	-	.1	3948	-
8	14	61	-	-	8.0	-	-	-	-	-	49	180	650	15	1000	675	.1	1399	-
8	21	61	-	-	8.0	-	-	-	-	-	93	186	1150	10	1000	1600	.2	2810	-
8	28	61	-	-	7.9	-	-	-	-	-	154	186	1600	5	125	2150	.1	3652	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE KANSAS

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN ARK. RIVER, KANS-COLO LINE TO TULSA

STATION LOCATION ARKANSAS RIVER AT

COOLIDGE, KANSAS

2

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
9	5	61	-	-	7.9	-	-	-	-	-	62	168	1550	5	0	2350	.0	3712	-
9	11	61	-	-	7.4	-	-	-	-	-	152	190	1470	5	0	2200	.0	3549	-
9	18	61	-	-	7.3	-	-	-	-	-	158	182	1470	5	0	2150	.0	3701	-
9	25	61	-	-	8.0	-	-	-	-	-	108	192	1230	10	5000	1800	-	-	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station near Coolidge, Kansas
Operated by U.S. Geological Survey

STATE: Kansas

MAJOR BASIN: Southwest-Lower Mississippi River

MINOR BASIN: Ark. River, Kans-Colo Line to Tulsa

STATION LOCATION: Arkansas River at Coolidge, Kansas

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	.0016	.079	.058	.090	.160	.114	.100	.104	.0041	.058	.0049	.043
2	.0016	.062	.065	.090	.124	.124	.104	.088	.125	.065	.0052	.031
3	.0017	.062	.065	.090	.118	.124	.104	.081	1.920	.142	.0052	.018
4	.0016	.068	.062	.100	.107	.107	.104	.078	2.630	.104	.0047	.012
5	.0016	.068	.068	.104	.140	.100	.097	.072	.879	.065	.0036	.0080
6	.0014	.062	.065	.100	.104	.100	.114	.061	.636	.049	.0034	.0070
7	.0014	.062	.065	.100	.114	.114	.124	.064	.396	.072	.0034	.0056
8	.0016	.062	.076	.100	.110	.114	.155	.072	.478	.372	.0041	.0090
9	.0021	.065	.100	.110	.118	.104	.190	.061	.282	.526	.042	.0056
10	.0021	.072	.095	.118	.114	.104	.190	.040	.218	.353	.020	.0056
11	.0021	.062	.086	.107	.104	.100	.185	.031	.185	.322	.015	.010
12	.0021	.054	.079	.094	.100	.100	.175	.027	.160	.452	.016	.020
13	.0021	.058	.065	.100	.104	.100	.180	.025	.156	.270	.530	.015
14	.0026	.058	.065	.110	.121	.110	.190	.027	.156	.170	.414	.015
15	.0034	.062	.072	.114	.124	.121	.270	.025	.142	.124	.224	.016
16	.0034	.062	.065	.118	.121	.121	.246	.025	.156	.132	.165	.013
17	.0047	.058	.062	.107	.121	.121	.234	.020	.137	.190	.224	.013
18	.026	.054	.062	.110	.118	.114	.212	.020	.127	.150	.426	.015
19	.054	.058	.072	.107	.104	.110	.258	.022	.127	.107	.459	.030
20	.054	.051	.095	.110	.100	.107	.246	.019	.114	.090	.276	.100
21	.068	.054	.100	.110	.100	.107	.229	.053	.104	.081	.224	.079
22	.132	.065	.095	.104	.104	.100	.218	.020	.100	.072	.240	.072
23	.109	.068	.095	.097	.107	.110	.234	.010	.065	.061	.229	.072
24	.072	.062	.095	.094	.107	.100	.264	.0074	.086	.053	.196	.086
25	.065	.054	.091	.100	.104	.100	.240	.0063	.142	.047	.175	.156
26	.058	.051	.082	.100	.104	.100	.240	.0058	.161	.047	.155	.205
27	.058	.049	.082	.084	.114	.094	.264	.0052	.205	.038	.123	.235
28	.047	.051	.079	.060	.114	.094	.288	.0047	.205	.036	.082	.265
29	.047	.058	.072	.114		.094	.294	.0047	.195	.031	.051	.286
30	.054	.068	.065	.124		.094	.190	.0041	.079	.0068	.047	.265
31	.062		.068	.135		.094		.0041		.0036	.047	

WATER QUALITY BASIC DATA

STATE SOUTH DAKOTA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN BIG SIOUX RIVER

STATION LOCATION BIG SIOUX RIVER BELOW SIOUX FALLS, SOUTH DAKOTA 80

RADIOACTIVITY DETERMINATIONS

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
5	19	61	6	6	1	0	1	0	0	0								
6	5	61	6	20	0	5	5	0	10	10								
6	15	61	7	5	1	5	6	0	0	0								
6	22	61	7	31	1	1	2	0	0	0								
6	29	61	7	27	0	0	0	0	9	9								
7	6	61	8	7	0	5	5	0	0	0								
7	12	61	8	8	0	0	0	0	3	3								
7	18	61	8	14	0	0	0	3	12	15								
7	25	61	8	14	0	1	1	0	1	1								
8	1	61	9	1	0	1	1	32	54	86								
8	8	61	9	8	0	1	1	0	9	9								
8	15	61	9	13	1	2	3	0	36	36								
8	22	61	9	26	1	1	2	0	26	26								
8	30	61	9	27	1	1	2	17	19	36								
9	6	61	10	6	0	0	0	4	29	33								
9	20	61	10	3	0	6	6	25	33	58								

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE SOUTH DAKOTA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN BIG SIOUX RIVER

STATION LOCATION BIG SIOUX RIVER BELOW SIOUX FALLS, SOUTH DAKOTA 80

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFIERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
5	19	61	22000	40	460	2590		2920		12070	3890	6130	790	82	70	56	10	26	*	92	*	10		10	3		6		71967
6	5	61	29700	340	180	4310		3040		18810	3040	8000	470	82	30	26	30	56	20	92	10	20			2		1		48963
6	22	61	13900	650	70	4470		2190	290	4670	1590	3490	600	82	40	56	40	26	10	21	*	10			10				4893–
7	6	61	20500	110	180	3240		740	90	13870	2230	4670	690	26	60	82	20	56	10	58	*	10			80	2	3		74963
7	18	61	21100	20	90	3660		650	310	13990	2390	3550	540	26	60	82	10	56	10	70	10	10	50	10	35	3	2	4	48967
8	1	61	10500		310	1680		1600		4140	2750	950	170	82	40	26	30	23	10	70	*	10	20	20	18		6		48967
8	22	61	8200			2190		400		4000	1650	3440	850	26	30	71	20	82	10	70	10	20			34		3		48165
9	6	61	10300		20	2300		470		5740	1740	3150	380	26	50	56	10	58	10	82	10	10	70	20	104	2	4		48967
9	20	61	3700			890		270	20	470	2010	180	690	26	60	82	10	56	10	58	10	20		10	45	1	24		48763

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE SOUTH DAKOTA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN BIG SIOUX RIVER

STATION LOCATION BIG SIOUX RIVER BELOW SIOUX FALLS, SOUTH DAKOTA 80

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
6	15	61	18.0	3.1	8.0	6.0	-	-	-	1.0	33	273	450	20	-	-	-	-	-
6	22	61	20.0	1.8	8.5	8.0	-	-	-	.6	32	240	452	20	-	214	-	606	-
6	29	61	26.0	2.9	7.7	6.5	-	-	-	.6	53	270	472	20	-	209	-	722	-
7	6	61	26.5	4.0	7.8	19.6	-	-	-	.4	53	249	398	25	31	227	-	660	-
7	11	61	27.0	1.8	7.7	28.0	-	-	-	.7	36	224	395	20	38	301	-	638	-
7	18	61	28.0	1.8	7.7	24.0	-	-	-	.8	56	189	334	25	-	162	-	667	220000
7	25	61	26.0	.3	7.3	20.0	-	-	-	1.8	73	247	438	25	-	205	-	702	860000
8	1	61	23.0	.0	7.4	-	-	-	-	2.8	136	261	470	25	-	232	-	1056	-
8	8	61	26.0	.8	7.5	22.0	-	-	-	3.0	55	227	442	25	-	254	-	706	2900000
8	15	61	26.0	.6	7.5	66.0	104	-	-	1.8	153	239	402	25	36	225	7.6	885	900000
8	22	61	22.0	.3	7.4	70.0	128	-	-	.4	112	222	356	35	29	197	8.8	715	6400000
8	30	61	22.0	.0	7.3	58.0	-	-	-	.4	78	192	360	30	31	207	7.2	642	3500000
9	6	61	16.0	.0	7.4	46.0	116	-	-	.2	138	220	376	40	37	178	11.2	806	10000000
9	13	61	14.0	.0	7.3	130.0	152	-	-	.5	214	235	444	50	38	213	10.0	783	8700000
9	20	61	16.0	.0	7.4	85.0	192	-	-	6.0	240	260	396	70	48	235	19.6	1138	6000000
9	27	61	12.0	.0	7.4	60.0	148	-	-	1.2	205	223	416	50	29	225	16.8	919	5500000

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Brandon, South Dakota
Operated by U.S. Geological Survey

STATE South Dakota

MAJOR BASIN Missouri River

MINOR BASIN Big Sioux River

STATION LOCATION Big Sioux River below Sioux Falls, South Dakota

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	.078	.059	.040	.025	.020	.904	.264	.126	.282	.300	.056	.070
2	.084	.056	.040	.025	.020	1.160	.252	.111	.261	.306	.055	.063
3	.073	.056	.045	.020	.020	1.410	.249	.116	.225	.231	.056	.050
4	.067	.056	.050	.042	.020	1.710	.243	.111	.216	.219	.059	.047
5	.072	.056	.050	.045	.020	1.510	.188	.126	.205	.196	.059	.050
6	.066	.056	.050	.041	.020	1.210	.188	.164	.264	.177	.059	.055
7	.066	.054	.045	.035	.020	1.080	.196	.143	.296	.152	.062	.045
8	.065	.052	.040	.033	.020	.904	.188	.150	.222	.137	.076	.050
9	.069	.052	.035	.030	.020	.712	.185	.145	.172	.116	.073	.041
10	.063	.050	.030	.035	.025	.632	.182	.152	.159	.107	.063	.040
11	.059	.047	.025	.034	.025	.562	.185	.167	.180	.114	.062	.034
12	.062	.049	.030	.034	.025	.527	.182	.167	.185	.120	.050	.041
13	.066	.054	.030	.034	.025	.516	.177	.185	.205	.162	.044	.042
14	.073	.051	.030	.034	.025	.660	.177	.157	.213	.219	.042	.034
15	.062	.054	.030	.032	.025	1.100	.169	.188	.234	.174	.044	.038
16	.054	.052	.035	.032	.025	1.230	.159	.167	.297	.130	.040	.028
17	.054	.041	.030	.032	.025	.896	.157	.225	.324	.111	.038	.032
18	.054	.033	.030	.034	.025	.684	.157	.306	.288	.098	.055	.032
19	.054	.030	.030	.032	.025	.565	.150	.422	.261	.088	.049	.034
20	.051	.026	.030	.025	.035	.502	.145	.432	.267	.085	.047	.057
21	.051	.026	.030	.020	.050	.477	.141	.516	.261	.079	.059	.112
22	.052	.030	.030	.020	.075	.450	.145	.483	.255	.078	.049	.044
23	.050	.030	.030	.020	.155	.405	.157	.489	.228	.079	.052	.040
24	.049	.030	.025	.020	.800	.375	.155	.431	.202	.069	.056	.039
25	.050	.030	.020	.020	.450	.354	.150	.621	.177	.066	.067	.039
26	.050	.030	.020	.020	.456	.345	.145	.715	.157	.063	.079	.039
27	.049	.030	.020	.020	.694	.339	.141	.537	.145	.062	.109	.039
28	.050	.030	.025	.020	.744	.321	.137	.429	.132	.060	.107	.039
29	.058	.030	.025	.025		.306	.130	.378	.124	.052	.109	.038
30	.065	.030	.025	.025		.303	.130	.351	.126	.050	.084	.038
31	.059		.025	.025		.288		.327		.050	.074	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE GEORGIA

MAJOR BASIN SOUTHEAST

MINOR BASIN CHATTACHOOCHEE RIVER

STATION LOCATION CHATTACHOOCHEE RIVER AT COLUMBUS, GEORGIA

59

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	10	60*	10	20	0	1	1	0	0	0								
10	24	60*	11	8	-	-	-	0	0	0								
11	7	60*	12	7	0	1	1	0	1	1								
11	28	60*	12	7	-	-	-	0	1	1								
12	12	60*	12	22	0	2	2	0	0	0								
12	27	60	2	2	-	-	-	0	0	0								
1	9	61*	3	1	0	0	0	0	0	0								
1	30	61*	2	9	-	-	-	0	0	0								
2	13	61*	3	1	0	0	0	0	0	0								
2	27	61*	3	16	-	-	-	6	0	6								
3	13	61*	3	28	1	0	1	0	0	0								
3	20	61	4	3	-	-	-	0	0	0								
3	27	61	4	12	-	-	-	0	3	3								
4	10	61*	4	24	1	1	2	0	0	0								
4	24	61*	5	3	1	0	1	0	0	0								
5	29	61*	6	6	0	0	0	0	0	0								
6	26	61*	7	12	0	0	0	0	0	0								
7	31	61*	8	11	1	1	2	0	0	0								
8	28	61*	9	13	0	0	0	2	3	5								
9	5	61	9	29	0	0	0	0	3	3								
9	11	61	10	3	-	-	-	0	1	1								
9	18	61	10	23	-	-	-	2	3	5								
9	25	61	10	3	-	-	-	0	2	2								

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE GEORGIA

MAJOR BASIN SOUTHEAST

MINOR BASIN CHATTACHOOCHEE RIVER

STATION LOCATION CHATTACHOOCHEE RIVER AT COLUMBUS, GEORGIA 59

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
			TOTAL	BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS														PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
MONTH	DAY	YEAR		COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST#	PERCENTAGE	SECOND#	PERCENTAGE	THIRD#	PERCENTAGE	FOURTH#	PERCENTAGE	OTHER PERCENTAGE							
10	3	60	400	20	20	90		20		180	80	70	90	57	20	90	10	3	10	28	10	50	20	10	1				------
10	17	60	1500	90		180		310	440	290	180	90	40	3	50	82	20	70	10	71	*	20	20	20	11	1			--931
11	7	60	1600	130		130		460	200	620		70	220	90	20	82	20	83	10	56	10	40		10	7				419-1
11	21	60	200			90		20		70		110	70	23	40	28	10	27	10	57	10	40		10	2				------
12	5	60	100						20		70	20	70												2				------
12	19	60	400		20	20		90		180	110			57	30	82	20	28	10	91	10	30	20	10	20				------
1	16	61	2300		20	70		160	250	1560	290	180	130	57	60	82	10	9	10	97	10	10	20	20	57				--9-7
2	6	61	1900		20	20			20	1450	430	50	130	57	80	82	10	92	*	58	*	10			5				--977
2	21	61	700		20					430	200	70	380	92	20	62	20	57	10	74	10	40			5				----7
3	6	61	200					20		20	130	20	110	57	30	92	20	62	10	58	*	50			2				------
3	20	61	300			40		180		90	110	70	110																------
4	3	61	400			40		50		180	130	130	130												13	3	2		------
4	17	61	200					20			160		110											10	11	4			------
5	1	61	1000			40		160		510	270	130	130	57	40	9	30	56	10	97	*	10	20		90	8			3---7
5	15	61	1600		20	20		40		870	630	50	160	57	40	58	30	9	20	82	*	10			17				3---7
6	5	61	2700	20	440	290		560		1200	170	190	270	58	60	56	20	59	10	57	*	10		20	408	147			219-7
6	19	61	2400		1820	210		130	20	210		60	40	56	30	57	20	58	10	9	10	30			601	39			24---
7	3	61	1100		250	190		170	40	330	150	80	170	56	20	58	20	57	20	59	10	30		10					----7
7	17	61	400			160		40		160		90		57	20	56	10	82	10	92	10	50		10	37	8			------
8	7	61	4800	60	1660	1220		170	60	1120	480	210	80	27	40	57	10	82	10	56	10	30		10	999	9	2		48-24
8	21	61	6200	60	230	1080		540	80	3110	1120	480	310	27	30	57	10	92	10	56	10	40	80	10	577	5			74-17
9	5	61	1700		170	390		310	60	620	190	190	80	27	20	23	20	57	20	70	10	30		30	321	8			4--47
9	18	61	900		100	190		80		370	120	150	20	56	30	57	20	58	10	93	10	40			105	13			------

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE GEORGIA
MAJOR BASIN SOUTHEAST
MINOR BASIN CHATTACHOOCHEE RIVER
STATION LOCATION CHATTACHOOCHEE RIVER AT COLUMBUS, GEORGIA

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	10	60	10		3770	228	60	168	2	16	17	2	1	13	1	8	5	1	11
11	7	60	11	16	4200	236	69	167	3	17	19	2	1	15	1	8	7	1	14
12	5	60	12	15	3446	192	61	131	4	16	15	2	1	12	0	6	5	1	14
1	6	61	1	14	3462	194	51	143	2	11	15	2	1	11	1	6	3	1	13
2	6	61	2	16	3523	-	*	174	-	-	-	-	-	-	-	-	-	-	-
3	6	61	3	14	3692	258	103	155	6	30	19	2	2	14	1	10	10	1	27
4	3	61	4	12	4028	209	116	93	7	35	23	6	2	15	0	9	14	1	27
5	2	61	5	12	4237	206	107	99	8	28	20	4	2	13	1	10	13	1	27
6	5	61	6	14	3553	224	89	135	4	22	25	5	2	17	1	11	9	2	16
7	3	61	7	12	4139	216	103	113	8	27	22	3	2	16	1	17	13	1	15
8	7	61	8	19	4890	223	98	125	7	25	21	3	2	15	1	9	11	1	24
9	14	61	9	25	4985	184	59	125	1	12	19	2	1	14	2	8	5	1	13

*NOT REPORTED-OVERHEATED

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE GEORGIA

MAJOR BASIN SOUTHEAST

MINOR BASIN CHATTACHOOCHEE RIVER

STATION LOCATION CHATTACHOOCHEE RIVER AT COLUMBUS, GEORGIA 59

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	23.0	6.8	6.9	2.1	18	2.8	5.2	-	4	18	12	-	30	-	-	-	170
10	10	60	23.5	7.7	7.0	1.2	17	2.2	4.8	-	4	17	14	-	30	-	-	-	120
10	17	60	23.5	7.7	7.1	1.6	20	.9	2.8	-	4	18	14	-	20	-	-	-	35
10	24	60	21.5	5.9	6.8	.8	18	1.1	1.9	-	4	18	16	-	20	-	-	-	190
10	29	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150
10	31	60	19.5	6.1	6.8	.7	46	.9	2.4	-	4	18	15	-	20	-	-	-	-
11	7	60	17.5	7.9	7.0	2.0	44	.7	2.1	-	4	19	15	-	20	-	-	-	58
11	14	60	15.5	8.5	7.1	1.0	42	.9	2.3	-	4	19	15	-	20	-	-	-	49
11	21	60	15.0	8.2	6.9	.8	48	1.2	2.1	-	4	19	15	-	8	-	-	-	73
11	28	60	15.5	8.4	6.9	.9	54	1.1	2.6	-	4	19	15	-	9	-	-	-	55
12	5	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67
12	6	60	12.5	9.1	6.9	1.8	45	1.1	2.9	-	4	19	15	0	10	-	-	-	-
12	12	60	11.5	9.8	6.9	1.0	48	1.0	2.8	-	4	18	15	-	10	-	-	-	55
12	19	60	10.0	10.2	6.9	.9	51	1.1	2.8	-	4	18	15	-	10	-	-	-	35
12	27	60	9.0	11.0	7.0	1.0	45	.9	2.9	-	4	18	14	-	8	-	-	-	40
1	3	61	8.5	10.6	7.0	.7	13	1.2	3.1	-	4	18	14	-	10	-	-	-	40
1	9	61	8.0	10.3	6.9	.8	15	1.4	3.8	-	4	18	14	-	15	-	-	-	29
1	16	61	9.0	10.6	7.0	.9	16	1.4	2.8	-	4	18	14	-	15	-	-	-	65
1	23	61	7.5	10.5	7.0	.6	12	1.2	2.9	-	4	18	15	-	15	-	-	-	13
1	30	61	7.0	11.0	7.1	.7	14	1.8	2.8	-	4	19	15	-	15	-	-	-	55
2	6	61	8.0	10.7	7.1	.7	19	1.8	3.9	-	4	17	16	-	10	-	-	-	33
2	13	61	8.5	10.8	7.3	1.3	14	1.1	2.9	-	5	19	13	-	10	-	-	-	5
2	20	61	12.0	10.8	6.9	1.9	22	3.6	6.0	-	4	15	15	-	220	-	-	-	400
2	27	61	14.0	11.4	6.6	1.4	30	2.6	6.4	-	4	7	10	-	440	-	-	-	4400
3	6	61	14.5	9.0	6.6	2.6	19	2.8	5.9	-	4	10	12	-	110	-	-	-	-
3	13	61	15.0	9.0	6.7	1.3	18	1.9	4.2	-	4	12	12	-	75	-	-	-	-
3	20	61	14.5	9.2	6.9	1.3	13	1.8	3.9	-	4	12	12	-	75	-	-	-	560
3	27	61	16.0	9.2	6.9	.7	13	.8	3.2	-	4	15	14	-	40	-	-	-	300
4	3	61	17.0	9.8	6.9	1.0	22	-	-	-	4	14	12	-	160	-	-	-	1500
4	10	61	17.0	8.9	6.9	1.0	15	1.4	3.6	-	4	13	12	-	104	-	-	-	340
4	17	61	17.0	9.0	6.9	1.3	17	.9	3.8	-	4	13	12	-	180	-	-	-	2400
4	24	61	17.0	8.5	6.9	.5	16	1.0	2.9	-	4	15	14	-	65	-	-	-	300
5	1	61	19.0	8.7	6.9	.7	18	1.6	-	-	4	15	12	-	40	-	-	-	1100
5	8	61	20.5	8.4	7.0	.6	16	1.4	2.7	-	4	15	12	-	40	-	-	-	420
5	15	61	20.5	6.8	7.0	.7	17	.9	2.8	-	4	16	13	-	20	-	-	-	47
5	22	61	24.0	9.0	7.3	1.9	24	1.4	3.8	-	3	18	14	-	20	-	-	-	60
5	29	61	21.5	8.3	7.1	1.1	16	.9	2.9	-	4	19	14	-	20	-	-	-	47
6	5	61	23.5	7.5	7.1	1.3	15	1.4	3.2	-	4	19	14	-	20	-	-	-	-
6	6	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80
6	12	61	26.0	9.0	7.4	6.5	16	-	-	-	4	20	14	-	20	-	-	-	40

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE GEORGIA

MAJOR BASIN SOUTHEAST

MINOR BASIN CHATTACHOOCHEE RIVER

STATION LOCATION CHATTACHOOCHEE RIVER AT COLUMBUS, GEORGIA

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
6	19	61	24.0	6.4	6.9	1.3	18	1.4	-	-	4	20	14	-	18	-	-	-	40
6	26	61	24.5	7.7	6.9	1.1	20	1.9	3.9	-	4	19	14	-	40	-	-	-	260
7	3	61	26.5	8.7	6.9	1.9	19	1.6	3.9	-	4	18	14	-	40	-	-	-	40
7	10	61	26.0	6.1	6.9	1.0	15	1.9	3.2	-	4	18	14	-	30	-	-	-	33
7	17	61	27.0	6.5	6.9	.8	19	-	-	-	4	18	14	-	30	-	-	-	120
7	24	61	27.5	5.9	6.9	.4	17	1.9	3.9	-	4	18	14	-	18	-	-	-	200
7	31	61	28.5	6.9	7.3	.5	18	-	-	-	4	19	15	-	10	-	-	-	55
8	7	61	28.0	6.6	7.1	1.5	17	1.6	3.8	-	4	19	15	-	10	-	-	-	-
8	14	61	28.0	6.8	6.9	1.1	18	1.4	3.6	-	4	19	14	-	10	-	-	-	-
8	21	61	27.0	7.0	7.0	.9	19	1.3	3.8	-	4	20	16	-	9	-	-	-	16
8	28	61	26.0	6.8	6.8	.4	26	1.6	2.8	-	4	18	16	-	40	-	-	-	540
9	5	61	27.5	7.6	7.1	.6	26	1.6	3.9	-	4	18	15	-	35	-	-	-	52
9	11	61	26.5	6.2	6.9	.7	21	-	-	-	4	18	15	-	30	-	-	-	-
9	18	61	24.5	5.6	6.9	.7	26	1.9	2.6	-	4	18	15	-	18	-	-	-	160
9	25	61	26.0	8.4	6.9	1.5	25	1.7	3.4	-	4	19	15	-	18	-	-	-	400

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Columbus, Georgia
Operated by U.S. Geological Survey

STATE Georgia

MAJOR BASIN Southeast

MINOR BASIN Chattahoochee River

STATION LOCATION Chattahoochee River at Columbus, Georgia

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	4.900	3.880	5.440	1.320	5.620	25.000	58.000	12.400	5.480	6.800	2.340	4.730
2	6.430	5.670	4.250	1.320	7.430	15.100	35.000	12.600	5.060	6.050	3.600	3.080
3	7.060	5.630	2.050	4.420	3.240	12.600	19.200	12.200	1.550	7.160	3.940	3.290
4	6.830	3.540	1.390	4.670	1.730	10.900	14.000	12.100	1.350	3.780	3.540	2.780
5	4.200	1.530	4.160	6.620	1.250	7.430	12.800	9.960	7.700	6.930	5.090	5.320
6	4.230	1.250	5.640	5.160	3.170	7.190	11.000	8.850	9.800	8.540	2.250	4.130
7	3.830	4.680	5.590	1.420	5.850	11.200	12.100	8.680	3.180	4.960	6.400	6.350
8	3.190	4.850	6.040	1.280	5.000	24.100	12.100	10.400	2.300	1.500	6.170	7.900
9	1.420	4.540	4.750	4.750	4.450	16.700	9.800	8.240	3.400	1.300	7.910	1.890
10	4.250	3.760	3.670	4.590	3.290	15.200	12.100	8.360	2.520	7.000	8.000	1.500
11	6.330	2.570	1.320	3.990	1.390	12.000	12.100	8.040	1.650	7.000	7.300	2.260
12	6.450	1.320	3.930	4.720	1.250	9.480	17.000	9.640	5.780	11.000	5.380	3.890
13	5.260	1.320	6.300	2.560	1.320	10.300	19.800	9.160	5.690	12.000	3.320	4.450
14	5.630	3.990	5.360	1.460	1.910	9.320	20.800	8.830	4.300	9.000	6.040	4.260
15	1.530	4.510	6.030	1.280	1.360	9.320	20.000	9.480	5.620	8.750	4.890	5.400
16	1.250	4.160	5.160	3.460	1.320	9.960	20.200	9.640	6.280	6.900	5.670	1.630
17	2.630	5.260	1.360	4.810	1.320	9.000	17.500	7.400	5.920	7.740	4.300	1.410
18	3.410	4.510	1.320	4.920	2.950	10.600	12.800	5.620	6.110	6.800	5.550	3.710
19	5.220	1.610	3.760	6.010	18.600	11.500	11.600	8.520	5.180	7.580	1.960	7.260
20	5.200	1.250	5.730	4.680	53.900	9.800	11.000	2.300	7.400	7.280	1.600	6.140
21	1.500	3.940	6.170	2.760	50.500	10.400	12.200	1.300	12.100	6.770	5.770	6.040
22	1.250	5.380	5.680	1.390	40.500	10.600	12.100	1.280	13.000	6.910	4.000	6.460
23	1.250	6.130	3.940	4.760	39.500	9.320	11.400	4.950	12.800	3.550	5.320	1.720
24	2.530	3.490	1.390	5.330	46.300	9.800	10.900	7.720	10.400	6.710	6.440	1.410
25	2.200	5.360	1.320	5.180	120.000	8.840	8.360	8.040	8.410	6.420	9.160	5.980
26	2.940	3.370	1.280	5.620	115.000	4.820	11.000	8.040	7.970	4.220	15.600	1.850
27	3.320	1.320	4.950	5.940	66.000	7.300	11.400	5.910	9.480	4.550	10.200	3.700
28	2.000	4.510	5.440	1.460	46.500	9.160	15.200	2.850	10.400	5.340	8.590	2.500
29	1.250	6.500	5.700	1.320		9.160	16.200	4.740	6.800	1.740	8.470	3.020
30	1.220	6.240	4.220	4.060		7.620	13.200	6.460	7.620	1.490	6.300	1.370
31	1.220		1.560	4.110		23.400		5.880		3.920	4.460	

WATER QUALITY BASIC DATA.

RADIOACTIVITY DETERMINATIONS

STATE GEORGIA
MAJOR BASIN SOUTHEAST
MINOR BASIN CHATTAHOOCHEE RIVER
STATION LOCATION CHATTAHOOCHEE RIVER AT
ATLANTA, GEORGIA 58

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	4	60	10	18	0	1	1	0	2	2								
10	12	60	10	21	–	–	–	0	3	3								
10	18	60	11	1	–	–	–	0	3	3								
11	9	60	11	28	–	–	–	0	0	0								
11	16	60	11	29	–	–	–	0	2	2								
11	23	60	12	2	–	–	–	0	1	1								
11	30	60	12	12	–	–	–	0	0	0								
12	7	60	12	29	0	0	0	0	0	0								
12	14	60	1	10	–	–	–	0	0	0								
12	28	60	1	20	–	–	–	0	1	1								
1	4	61	1	24	0	0	0	1	0	1								
1	18	61	2	2	–	–	–	0	0	0								
1	25	61	2	7	–	–	–	0	6	6								
2	1	61	2	20	0	0	0	0	0	0								
2	8	61	2	24	0	0	0	7	11	18								
2	15	61	3	6	–	–	–	0	0	0								
2	22	61	3	8	–	–	–	11	2	13								
3	1	61	3	20	–	–	–	0	0	0								
3	8	61	3	27	2	0	2	0	0	0								
3	22	61	4	7	–	–	–	0	0	0								
3	29	61	4	12	–	–	–	0	0	0								
4	5	61	5	3	0	0	0	0	0	0								
4	12	61	4	27	–	–	–	0	5	5								
4	19	61	5	10	–	–	–	0	0	0								
4	27	61	5	17	–	–	–	0	0	0								
5	3	61	5	25	0	0	0	0	0	0								
5	10	61	5	25	–	–	–	0	0	0								
5	24	61	6	8	–	–	–	0	0	0								
5	31	61	6	20	–	–	–	0	0	0								
6	7	61	6	27	0	0	0	0	0	0								
6	14	61	7	6	–	–	–	0	0	0								
6	21	61	7	11	–	–	–	0	2	2								
6	28	61	7	26	–	–	–	2	0	2								
8	2	61*	8	25	1	0	1	3	0	3								
8	30	61*	9	18	0	0	0	2	1	3								
9	6	61	9	29	0	0	0	0	0	0								
9	13	61	10	3	–	–	–	0	2	2								
9	27	61	10	30	–	–	–	0	6	6								

WATER QUALITY BASIC DATA

STATE GEORGIA

MAJOR BASIN SOUTHEAST

PLANKTON POPULATION

MINOR BASIN CHATTAHOOCHEE RIVER

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATION LOCATION CHATTAHOOCHEE RIVER AT ATLANTA, GEORGIA

58

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	4	60	300	160				20		50	110		130	65	30	66	10	2	10	28	10	40	20		3				------
11	2	60	100					20	20		90	20	70	62	20	28	20	93	10	16	*	50	40		3				------
11	16	60	100			20			20		20		90	28	30	62	10	2	10	93	10	50			2				------
11	30	60	200					20					90	28	30	57	10	2	10	62	10	50							------
12	14	60	100	20		20			20	20	20	90	20	93	20	57	10	28	10	2	10	50	20						------
12	28	60	100							50	70		20	92	20	57	10	28	10	29	10	60		10					------
1	9	61	100				20				70	50	70	97	20	28	20	57	10	93	10	50							------
1	25	61									50	90	20												2		1		------
2	8	61	300						50	110	90		110	57	30	88	10	92	10	62	10	50		10					------
2	22	61	200								200		50	92	10	2	10	31	*	14	*	70							------
3	8	61								20	20												20						------
3	22	61	400					70	20	180	90	90	70	57	40	9	20	56	10	95	10	20	70		4				4----
4	5	61	200					20		110	70	90	50												18				------
4	19	61	900					20		540	310	20	40	57	40	9	30	95	10	56	10	20			7	5			34--7
5	3	61	800					20		350	440	190	230	9	30	57	30	95	10	56	10	20			1				3---7
5	10	61	500				20	20		220	250	50	110	57	30	9	20	92	10	95	*	40			9	3	1		3---7
5	31	61	300			20		40		60	190	40	150	57	20	9	10	92	10	2	10	50			1		2		------
6	14	61	200			20				60	120	40	100										60		1		1		------
6	28	61	400			20				60	330	60	100																------
7	12	61								20			160	95	10	2	10	92	10	56	10	60			3	3	1		------
8	10	61	200				20			40	120	80	20																------
8	23	61	200		20	20					120	20	60	92	10	95	10	43	10	56	10	70			1				------
9	6	61	100			20				20	60		20												3	1			------
9	20	61	100			20			20		100		60												5				------

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE GEORGIA

MAJOR BASIN SOUTHEAST

MINOR BASIN CHATTAHOOCHEE RIVER

STATION LOCATION CHATTAHOOCHEE RIVER AT ATLANTA, GEORGIA

58

DATE OF SAMPLE						EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY	GALLONS FILTERED	TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	21	60	11	7	6240	174	67	107	1	21	13	1	1	11	0	7	7	1	17
11	22	60	12	7	5050	171	60	111	4	19	10	1	1	8	0	5	6	1	15
12	27	60	1	11	5130	243	69	174	2	18	15	1	1	12	1	6	5	1	22
1	31	61	2	15	5300	231	108	123	9	31	16	1	1	13	1	8	11	1	32
3	9	61	3	29	5120	162	82	80	7	21	16	1	1	13	1	7	8	2	21
4	28	61	6	1	5030	219	80	139	4	21	18	3	2	13	0	9	7	1	20
6	16	61	7	3	5570	*	76	*	5	26	15	2	2	11	0	8	8	1	13
7	24	61	9	11	6120	133	59	74	2	12	17	3	2	11	1	6	5	1	16

*NOT REPORTED--OVERHEATED

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NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE GEORGIA

MAJOR BASIN SOUTHEAST

MINOR BASIN CHATTAHOOCHEE RIVER

STATION LOCATION CHATTAHOOCHEE RIVER AT ATLANTA, GEORGIA

58

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	4	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1800
10	12	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280
10	18	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1900
10	26	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1200
11	2	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
11	9	60	7.8	10.1	6.9	-	24	-	-	.0	*1	12	10	*5	7	*1	-	16	190
11	16	60	8.3	9.3	6.9	.8	22	-	-	.0	*1	11	12	*5	8	*1	-	16	40
11	23	60	10.3	9.6	6.7	.8	28	-	-	.0	*1	10	12	*5	-	*1	-	16	150
11	30	60	8.9	9.8	6.9	-	26	.9	2.1	.0	*1	13	12	*5	-	*1	-	17	550
12	7	60	8.9	9.9	6.9	.9	15	1.1	2.2	.0	*1	14	12	*5	7	*1	-	16	420
12	14	60	4.4	12.2	6.8	-	-	1.1	2.1	.0	*1	12	14	*5	-	*1	-	17	1000
12	28	60	6.6	10.7	6.9	.6	18	.9	2.1	.0	*1	14	12	*5	6	*1	-	19	310
1	4	61	4.4	10.7	6.9	.6	9	1.0	2.0	.0	*1	12	12	*5	6	*1	-	15	450
1	11	61	5.0	12.2	6.9	.6	12	.9	1.9	.0	*1	12	12	*5	6	*1	-	16	2000
1	18	61	4.4	11.8	6.9	.8	8	.9	1.9	.0	*1	12	14	*5	7	*1	-	16	190
1	25	61	2.8	12.1	6.9	.6	13	1.2	2.2	.0	*1	12	14	*5	8	*1	-	17	220
2	1	61	3.3	12.4	6.9	.7	8	1.9	2.6	.0	*1	13	12	*5	9	*1	-	17	370
2	8	61	2.8	12.4	6.9	1.0	8	2.5	3.6	.3	*1	12	12	*5	14	*1	-	17	5200
2	15	61	7.2	11.0	6.9	.8	39	1.2	2.4	.2	1	12	12	5	5	1	-	16	1500
2	22	61	7.8	10.7	6.5	2.4	-	3.9	4.9	.2	1	7	8	5	220	1	-	-	-
3	1	61	8.8	10.1	6.7	.8	-	2.9	4.9	.0	1	11	10	5	47	1	-	18	600
3	8	61	13.9	9.4	6.9	1.8	49	2.9	4.9	.0	1	12	10	5	63	1	-	17	-
3	15	61	8.8	11.3	6.9	.3	43	1.8	2.4	.0	*1	9	8	5	27	*1	-	14	100
3	22	61	8.3	10.7	6.9	.6	51	2.4	5.0	.0	*1	11	10	5	14	*1	-	14	3000
3	29	61	8.3	10.6	6.9	.3	50	1.4	3.9	.0	*1	11	9	5	18	*1	-	14	1100
4	5	61	8.3	10.4	6.9	1.5	49	3.8	-	.0	*1	9	10	5	8	*1	-	18	5400
4	12	61	9.4	10.3	6.9	.4	49	1.6	3.0	.0	*1	10	6	5	19	*1	-	14	700
4	19	61	11.7	10.7	6.9	.8	45	.9	1.8	.0	*1	10	8	5	15	*1	-	13	950
4	27	61	15.0	10.2	7.0	1.0	53	1.9	3.9	.0	*1	11	8	5	16	*1	-	13	3700
5	3	61	9.4	10.3	7.1	1.3	-	1.6	3.7	.0	*1	10	8	5	18	*1	-	14	1300
5	10	61	12.8	9.5	7.0	1.2	18	1.8	3.6	.0	*1	12	8	5	13	*1	-	16	370
5	17	61	12.2	9.8	7.0	.6	18	1.9	3.7	.0	*1	10	8	5	9	*1	-	16	2800
5	24	61	12.7	8.9	7.1	.6	15	1.5	3.8	.0	1	13	8	5	11	1	-	17	2100
5	31	61	13.3	9.1	7.1	.8	49	2.0	4.0	.0	1	13	8	5	6	1	-	17	2400
6	7	61	16.6	8.7	7.0	.5	12	2.0	4.0	.0	1	12	10	5	7	1	-	16	670
6	14	61	16.1	8.3	7.0	.6	11	.3	2.3	.0	1	13	8	5	11	1	-	16	1400
6	21	61	14.4	8.3	6.9	.6	10	3.8	4.9	.0	1	12	10	5	30	1	-	18	13000
6	28	61	17.7	8.5	6.7	.7	15	4.0	5.2	.0	1	11	10	5	45	1	-	18	8000
7	5	61	15.5	8.6	6.9	.6	58	3.9	4.8	.0	1	11	10	5	12	1	-	15	1900

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE GEORGIA

MAJOR BASIN SOUTHEAST

MINOR BASIN CHATTAHOOCHEE RIVER

STATION LOCATION CHATTAHOOCHEE RIVER AT ATLANTA, GEORGIA

58

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	12	61	14.4	8.6	6.9	.7	49	2.8	3.9	.0	1	10	8	5	28	1	-	16	310
7	19	61	15.0	8.8	6.7	.8	51	3.8	4.9	.0	1	11	8	5	17	1	-	15	5400
7	26	61	16.1	8.3	6.9	.6	50	3.9	5.0	.0	1	12	8	5	12	1	-	17	8800
8	2	61	16.1	8.5	6.9	.8	44	3.9	5.0	.0	1	12	10	5	8	1	-	15	2500
8	9	61	15.5	8.1	6.9	.4	46	2.9	4.0	.0	1	12	8	5	9	1	-	15	5000
8	16	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5600
8	30	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	790
9	6	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4000
9	13	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3500
9	20	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	810
9	27	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	550

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Atlanta, Georgia
Operated by U.S. Geological Survey

STATE Georgia

MAJOR BASIN Southeast

MINOR BASIN Chattahoochee River

STATION LOCATION Chattahoochee River at Atlanta, Georgia

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	2.140	1.960	4.100	1.360	1.600	1.920	4.450	2.630	1.950	3.680	2.770	2.240
2	1.260	2.260	4.110	1.590	1.600	1.870	1.720	4.510	2.020	2.410	3.410	1.620
3	.898	2.290	3.070	2.250	1.610	1.840	2.880	5.390	1.520	2.930	3.480	1.330
4	.865	2.250	1.270	2.500	1.230	1.510	3.660	5.100	1.300	3.520	3.360	1.240
5	.922	1.770	2.130	2.530	1.080	1.330	3.940	5.240	1.550	3.740	2.280	1.740
6	1.620	1.290	4.020	2.460	1.480	1.530	5.110	3.940	2.680	3.610	1.400	1.680
7	1.060	1.580	4.050	1.610	1.670	1.890	5.330	1.270	2.730	3.690	1.820	1.640
8	1.320	1.890	4.080	1.300	1.740	2.780	4.120	1.510	2.850	2.760	3.020	1.720
9	1.900	2.280	4.120	1.600	1.730	2.540	1.450	1.660	2.800	1.420	3.340	1.450
10	1.660	2.400	3.120	2.540	1.720	1.880	2.950	2.200	1.700	2.100	5.460	1.130
11	1.780	2.320	1.440	2.550	1.380	1.520	4.180	2.780	1.340	4.450	6.100	1.560
12	1.710	1.940	1.870	2.460	1.200	1.340	6.820	2.570	1.560	4.940	4.920	3.210
13	1.700	1.320	2.660	2.540	1.340	2.840	6.570	1.510	2.510	5.170	1.440	3.270
14	1.690	1.810	2.480	1.730	1.540	5.010	5.820	1.220	2.740	5.200	2.220	3.340
15	1.410	3.960	2.500	1.320	1.540	4.840	4.200	2.260	3.180	3.830	4.080	3.360
16	1.250	4.050	2.420	2.010	1.500	4.880	1.630	3.340	3.030	1.520	3.590	2.140
17	1.310	4.080	1.900	2.480	1.660	4.490	3.120	3.520	1.740	2.540	3.400	1.340
18	1.680	3.920	1.280	2.540	1.700	3.270	5.920	3.800	1.350	4.660	3.400	1.550
19	1.680	2.970	1.570	2.570	2.440	1.310	6.320	3.730	1.600	4.740	2.130	3.700
20	2.130	1.290	2.700	2.610	4.420	3.100	6.100	2.660	2.410	4.600	1.380	3.400
21	1.810	1.840	2.570	1.920	16.500	4.540	6.060	1.200	3.400	4.460	2.020	3.490
22	1.440	4.110	2.700	1.330	10.800	4.280	4.650	1.660	3.510	3.090	4.650	3.550
23	1.280	4.240	2.650	1.600	7.180	4.600	1.300	2.380	3.740	1.440	4.720	2.180
24	1.580	4.260	1.940	2.240	5.590	4.520	2.520	2.580	3.460	1.820	5.080	1.350
25	1.700	4.200	1.310	2.250	20.200	3.100	4.410	2.340	2.860	3.080	5.050	1.650
26	2.130	3.060	1.560	2.360	9.520	1.280	5.280	2.580	3.460	3.010	4.250	1.740
27	2.160	1.280	1.740	2.220	3.180	2.900	7.180	1.680	4.230	2.910	1.580	1.790
28	1.900	2.250	1.710	1.710	2.200	3.460	5.960	1.240	4.820	2.920	1.700	1.790
29	1.710	4.120	1.720	1.290		3.470	4.600	1.580	3.820	1.990	1.820	2.170
30	1.290	4.100	1.740	1.630		3.730	1.320	1.840	3.620	1.610	2.040	1.470
31	1.670		1.480	1.750		6.820		2.010		1.450	2.120	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE ARIZONA

MAJOR BASIN COLORADO RIVER

MINOR BASIN LOWER COLORADO RIVER

STATION LOCATION COLORADO RIVER AT YUMA, ARIZONA

3

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	3	60	10	19	-	-	-	0	0	0									
10	10	60	11	15	0	5	5	0	9	9									
10	24	60*	11	15	1	0	1	0	0	0									
11	7	60	12	15	0	7	7	0	0	0									
11	28	60*	12	9	2	6	8	0	0	0									
12	12	60*	1	6	0	8	8	0	0	0									
12	19	60	1	19	0	9	9	0	0	0									
1	9	61*	1	24	0	15	15	0	0	0									
1	30	61*	2	7	0	5	5	0	0	0									
2	13	61*	3	3	1	4	5	0	0	0									
2	27	61*	3	16	0	4	4	0	0	0									
3	13	61*	3	24	1	13	14	0	22	22									
3	27	61*	4	12	0	0	0	0	0	0									
4	10	61*	4	24	0	6	6	0	1	1									
4	24	61*	5	15	0	4	4	0	0	0									
5	8	61*	5	22	0	3	3	0	0	0									
5	29	61*	6	14	0	1	1	0	0	0									
6	12	61*	7	20	1	11	12	0	0	0									
6	26	61*	7	14	0	7	7	0	0	0									
7	10	61*	8	3	0	5	5	0	0	0									
7	31	61*	8	30	1	13	14	0	0	0									
8	14	61*	9	19	3	5	8	0	4	4									
8	28	61	9	18	0	4	4	0	141	141									
9	5	61	9	29	-	-	-	19	0	19									
9	11	61	10	19	-	-	-	0	9	9									
9	18	61	10	14	-	-	-	21	108	129									
9	25	61	10	6	2	2	4	14	0	14									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE ARIZONA

MAJOR BASIN COLORADO RIVER

MINOR BASIN LOWER COLORADO RIVER

STATION LOCATION COLORADO RIVER AT YUMA, ARIZONA 3

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	3	60	200	50						20	90		90	26	20	8	10	91	10	70	10	50	70		1	1			------
10	24	60	700			90				50	540		20	91	10	70	10	8	10	92	10	60	160		3	4	3	1	---6-
11	7	60	2000	20		220			70	270	1410	70	740	46	20	7	10	6	10	8	10	40	180					1	--766
11	14	60	1800		50	20		70	90	650	920		360	82	20	91	20	8	10	16	10	50				2			--973
11	28	60	300						20	50	180	20	110	91	20	70	10	33	10	92	10	60			1	3			------
12	12	60	600			40		110		40	400	40	550	70	30	87	10	92	10	16	10	40	130		1	4	1		------
1	3	61	400					20		70	290		380	4	20	70	10	36	10	94	10	60	90		2				------
1	16	61	300			50				70	180	20	340	87	20	5	20	26	*	36	*	60					10		------
1	30	61	200					20		70	130	20	360	26	10	5	10	70	10	91	10	60				6			------
2	13	61	500							250	290		710	87	20	36	10	92	10	5	10	60							4----
2	27	61	500			70		20		130	270		160	75	20	82	10	87	10	94	10	50							------
3	13	61	1200			20		70		310	800	20	400	87	20	75	10	94	10	65	10	50							4-7-3
3	27	61	300			20	20	20		90	180		20	94	10	7	10	82	10	75	10	70	50						------
4	3	61	2300		20	70		200		710	1330	70	490	94	20	7	10	65	10	87	10	60	70		2		1		74963
4	10	61	800			70		20		290	470	490	450	94	20	26	10	87	10	5	*	60			5	10			4----
4	24	61	600						20	180	400	20	510	94	40	70	10	7	10	82	10	40	20		5	1		1	---7-
5	8	61	1400			130	20			250	980	20	1120	94	20	87	10	7	10	92	10	60			25	7	9	1	--773
5	23	61	1100			70	20			250	740	20	870	94	20	92	20	6	10	7	10	40			14	6	6		---7-
6	5	61	2600		40	170		100		480	1780	100	230	94	20	92	20	87	10	7	10	50							4-973
6	19	61	1800			230		20	20	170	1390	40	210	87	20	92	20	94	10	75	10	50			3				---73
7	3	61	5200			210		210	40	950	3750	40	290	8	50	7	10	94	*	26	*	40							48773
7	17	61	3500	20	20	390		40		1080	1930	20	500																487-3
7	31	61	1600			270		20		230	1080		120	92	20	87	10	6	10	46	10	40			1				4--73
8	14	61	2100	20	20	100	20		20	730	1180	20	40	94	40	65	10	92	10	7	10	30							4-77-
9	5	61	2600			150		60	20	990	1370	20	210	92	20	26	10	65	10	6	10	60						1	-4773
9	18	61	2700			170				1530	1040	60	230	11	20	92	10	87	10	6	10	70							--79-

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE ARIZONA

MAJOR BASIN COLORADO RIVER

MINOR BASIN LOWER COLORADO RIVER

STATION LOCATION COLORADO RIVER AT YUMA, ARIZONA

3

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	4	60	10	13	3000	240	39	201	1	11	13	2	1	9	1	4	2	1	7
12	1	60	12	13	5530	161	26	135	0	5	11	1	1	8	1	2	1	1	6
4	10	61	4	19	2210	486	100	386	-	-	-	-	-	-	-	-	-	-	-
5	8	61	5	17	3000	361	71	290	-	-	-	-	-	-	-	-	-	-	-
5	8	61		*	5210	414	83	331	3	25	22	3	2	17	0	10	8	2	13
7	9	61	7	14	2460	448	91	357	-	-	-	-	-	-	-	-	-	-	-
8	2	61	8	15	4120	212	31	181	-	-	-	-	-	-	-	-	-	-	-
8	2	61		*	6580	300	53	247	2	11	23	10	3	10	0	5	3	1	8

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE ARIZONA
MAJOR BASIN COLORADO RIVER
MINOR BASIN LOWER COLORADO RIVER
STATION LOCATION COLORADO RIVER AT YUMA, ARIZONA

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	24.0	-	8.2	-	-	-	-	-	215	178	420	-	24	-	-	-	240
10	10	60	20.0	-	8.0	-	-	-	-	-	155	150	364	-	27	-	-	-	960
10	17	60	17.0	-	8.2	-	-	-	-	-	145	150	406	-	35	-	-	-	240
10	24	60	20.0	-	8.2	-	-	-	-	-	190	134	374	-	24	-	-	-	30
11	7	60	18.0	-	8.2	-	-	-	-	-	267	142	434	-	30	-	-	-	400
11	14	60	15.0	-	8.2	-	-	-	-	-	288	154	430	-	32	-	-	-	260
11	21	60	12.5	-	8.2	-	-	-	-	-	262	154	470	-	26	-	-	-	310
11	28	60	12.0	-	8.2	-	-	-	-	-	222	150	406	-	35	-	-	-	440
12	5	60	12.0	-	7.8	-	-	-	-	-	202	124	392	-	35	-	-	-	270
12	12	60	9.5	-	8.2	-	-	-	-	-	307	160	456	-	62	-	-	-	160
12	19	60	9.5	-	8.2	-	-	-	-	-	560	184	622	-	35	-	-	-	260
12	27	60	10.5	-	8.2	-	-	-	-	-	540	170	620	-	35	-	-	-	310
1	3	61	9.0	-	8.2	-	-	-	-	-	515	180	596	0	32	-	-	-	-
1	9	61	12.0	-	8.2	-	-	-	-	-	630	200	680	-	38	-	-	-	900
1	16	61	11.0	-	8.2	-	-	-	-	-	670	192	704	-	45	-	-	-	1600
1	23	61	13.0	-	8.2	-	-	-	-	-	654	192	716	0	35	-	-	-	280
1	30	61	13.0	-	8.2	-	-	-	-	-	420	152	560	-	32	-	-	-	350
2	6	61	12.0	-	8.2	-	-	-	-	-	652	180	716	-	45	-	-	-	30
2	13	61	13.0	-	8.2	-	-	-	-	-	724	180	640	-	-	-	-	-	60
2	20	61	11.0	-	-	-	-	-	-	-	718	184	764	-	35	-	-	-	-
2	27	61	11.5	-	8.2	-	-	-	-	-	820	192	832	-	38	-	-	-	260
3	6	61	14.5	-	8.2	-	-	-	-	-	802	188	832	-	32	-	-	-	100
3	13	61	18.0	-	8.2	-	-	-	-	-	664	176	716	-	42	-	-	-	120
3	20	61	16.0	-	8.2	-	-	-	-	-	610	180	692	-	45	-	-	-	120
3	27	61	16.5	-	8.2	-	-	-	-	-	588	172	672	-	40	-	-	-	18
4	3	61	18.0	-	8.2	-	-	-	-	-	790	180	860	-	48	-	-	-	-
4	4	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240
4	10	61	20.0	-	-	-	-	-	-	-	730	180	720	-	48	-	-	-	50
4	17	61	20.0	-	8.2	-	-	-	-	-	875	196	884	-	48	-	-	-	260
4	24	61	16.0	-	8.2	-	-	-	-	-	925	200	888	-	30	-	-	-	200
5	1	61	26.5	-	8.2	-	-	-	-	-	975	216	952	-	38	-	-	-	20
5	8	61	25.5	-	8.2	-	-	-	-	-	900	216	872	-	43	-	-	-	-
5	15	61	21.0	-	8.2	-	-	-	-	-	935	212	908	-	30	-	-	-	220
5	23	61	25.0	-	8.2	-	-	-	-	-	780	192	780	-	35	-	-	-	-
5	29	61	22.0	-	8.2	-	-	-	-	-	690	184	712	-	32	-	-	-	500
6	5	61	23.0	-	8.2	-	-	-	-	-	700	188	716	-	50	-	-	-	200
6	12	61	25.0	-	8.2	-	-	-	-	-	645	192	680	-	35	-	-	-	-
6	19	61	27.0	-	8.2	-	-	-	-	-	685	192	716	-	45	-	-	-	780
6	26	61	28.0	-	8.2	-	-	-	-	-	740	192	760	-	35	-	-	-	100

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE ARIZONA

MAJOR BASIN COLORADO RIVER

MINOR BASIN LOWER COLORADO RIVER

STATION LOCATION COLORADO RIVER AT YUMA, ARIZONA

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	3	61	26.0	-	8.2	-	-	-	-	-	1055	220	948	-	49	-	-	-	-
7	10	61	28.0	-	8.2	-	-	-	-	-	774	210	800	-	45	-	-	-	*100
7	14	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*33
7	17	61	25.0	-	8.2	-	-	-	-	-	760	192	720	-	34	-	-	-	-
7	24	61	28.0	-	8.2	-	-	-	-	-	790	192	728	-	39	-	-	-	33
7	31	61	29.0	-	8.2	-	-	-	-	-	525	196	600	-	50	-	-	-	33
8	7	61	29.0	-	8.2	-	-	-	-	-	790	188	720	-	62	-	-	-	*100
8	14	61	28.5	-	8.2	-	-	-	-	-	785	200	845	-	52	-	-	-	-
8	21	61	30.0	-	8.2	-	-	-	-	-	935	200	872	-	30	-	-	-	-
8	28	61	29.2	-	7.8	-	-	-	-	-	920	204	876	-	35	-	-	-	-
9	5	61	23.0	-	8.2	-	-	-	-	-	950	184	832	-	45	-	-	-	-
9	11	61	26.0	-	8.2	-	-	-	-	-	1000	216	932	-	48	-	-	-	-
9	18	61	23.0	-	8.2	-	-	-	-	-	985	204	940	-	32	-	-	-	3000
9	25	61	24.0	-	8.2	-	-	-	-	-	1125	224	1060	-	52	-	-	-	200

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station below Yuma, Arizona
Operated by U.S. Geological Survey

STATE: Arizona

MAJOR BASIN: Colorado River

MINOR BASIN: Lower Colorado River

STATION LOCATION: Colorado River at Yuma, Arizona

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	1.300	1.030	3.450	1.290	3.490	2.060	2.620	1.530	2.480	2.160	1.080	1.580
2	1.070	1.240	3.530	1.510	3.390	2.180	2.930	1.450	2.740	2.470	1.150	1.400
3	1.240	1.060	3.650	1.770	1.780	2.090	2.950	1.490	2.850	2.560	1.380	1.670
4	1.300	1.020	3.830	1.860	.987	2.330	2.690	1.440	3.000	2.250	1.550	1.710
5	1.200	.967	3.750	1.680	1.020	2.780	2.530	1.540	2.920	2.090	1.410	2.040
6	.846	1.130	3.020	1.560	.970	2.370	2.270	1.470	2.890	2.020	1.340	1.910
7	1.320	1.620	3.030	1.430	.884	2.030	2.370	1.290	2.820	2.140	1.300	1.420
8	1.320	2.010	1.120	1.480	.935	2.380	2.400	1.290	2.460	2.230	1.300	.993
9	.846	2.190	1.040	1.360	1.000	2.530	2.520	1.220	2.520	2.530	1.340	1.010
10	1.530	1.500	1.060	1.510	.952	2.600	2.380	1.220	2.720	2.400	1.450	.998
11	1.020	1.090	1.350	1.390	1.190	2.720	2.370	1.250	2.890	2.330	1.400	1.050
12	.761	1.160	1.700	1.400	.999	2.910	2.360	1.350	2.750	2.270	1.460	.986
13	.759	1.070	1.170	1.810	1.100	2.320	2.370	1.350	2.730	2.240	1.500	.999
14	1.100	.925	1.320	1.650	.950	2.340	2.440	1.460	2.900	2.350	1.450	1.030
15	1.240	.822	1.200	1.620	1.100	2.480	2.580	1.530	2.830	2.320	1.380	1.100
16	1.650	1.410	.908	.854	1.060	2.620	2.630	1.770	2.580	2.260	1.400	1.820
17	1.880	1.420	.945	.758	1.210	2.590	2.400	1.800	2.260	2.150	1.450	1.830
18	1.350	.973	1.030	.658	1.160	2.570	2.970	1.690	2.380	2.070	1.380	1.760
19	1.530	.994	1.270	.721	1.320	2.780	2.920	1.720	2.760	2.170	1.430	1.330
20	1.310	.918	1.510	.763	2.070	2.710	2.560	1.990	2.840	2.140	1.440	1.380
21	1.420	.699	1.200	.790	2.650	2.580	2.320	1.790	2.300	2.120	1.290	1.340
22	1.860	.633	.749	.745	2.380	2.460	2.070	1.970	1.920	2.160	1.200	1.250
23	1.580	.666	.770	.830	2.100	2.280	1.980	2.000	1.960	2.360	1.200	1.240
24	1.420	.750	.773	.963	1.920	2.390	1.850	1.880	2.230	1.760	1.110	1.230
25	1.190	.857	.835	1.770	1.710	2.490	1.670	1.940	2.120	1.380	1.280	1.220
26	.976	3.020	1.620	2.960	1.730	2.590	1.690	1.910	2.240	1.280	1.190	1.220
27	1.050	3.860	1.360	2.700	1.680	2.350	1.550	2.160	2.260	1.250	1.040	1.380
28	1.160	3.740	.812	3.560	1.820	2.360	1.370	2.360	1.980	1.260	1.210	1.200
29	1.310	3.450	.778	3.660		2.370	1.410	2.270	2.010	1.260	1.200	1.220
30	1.170	3.490	.780	3.600		2.420	1.660	2.380	2.020	1.310	1.340	1.330
31	1.350		.773	3.460		2.490		2.350		1.180	1.680	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE CALIFORNIA
MAJOR BASIN COLORADO RIVER
MINOR BASIN LOWER COLORADO RIVER
STATION LOCATION COLORADO RIVER ABOVE PARKER DAM, ARIZONA-CALIFORNIA

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	12	60*	11	2	0	21	21	0	2	2								
10	26	60*	11	17	0	13	13	0	0	0								
11	9	60*	11	29	0	12	12	0	6	6								
11	30	60*	12	20	0	8	8	0	5	5								
12	14	60*	1	9	0	8	8	0	19	19								
12	28	60*	1	16	0	11	11	0	0	0								
1	11	61	1	31	0	12	12	0	0	0								
2	1	61*	2	17	0	6	6	0	0	0								
2	14	61*	3	3	0	6	6	0	13	13								
2	22	61	3	22	0	2	2	0	0	0								
3	15	61*	3	31	0	6	6	0	12	12								
3	29	61*	4	14	0	5	5	0	28	28								
4	14	61*	5	2	0	9	9	0	26	26								
4	26	61*	5	16	0	10	10	0	5	5								
5	3	61	6	1	1	7	8	0	0	0								
5	31	61	6	14	0	7	7	0	3	3								
6	14	61*	7	31	0	10	10	0	0	0								
6	21	61	8	28	0	8	8	9	0	9								
8	2	61*	8	31	0	10	10	0	10	10								
8	8	61	9	27	0	8	8	15	0	15								
9	13	61	10	20	2	4	6	0	38	38								
9	20	61	10	2	0	6	6	3	0	3								

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station below Yuma, Arizona
Operated by U.S. Geological Survey

STATE Arizona

MAJOR BASIN Colorado River

MINOR BASIN Lower Colorado River

STATION LOCATION Colorado River at Yuma, Arizona

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	1.300	1.030	3.450	1.290	3.490	2.060	2.620	1.530	2.480	2.160	1.080	1.580
2	1.070	1.240	3.530	1.510	3.390	2.180	2.930	1.450	2.740	2.470	1.150	1.400
3	1.240	1.060	3.650	1.770	1.780	2.090	2.950	1.490	2.850	2.560	1.380	1.670
4	1.300	1.020	3.830	1.860	.987	2.330	2.690	1.440	3.000	2.250	1.550	1.710
5	1.200	.967	3.750	1.680	1.020	2.780	2.530	1.540	2.920	2.090	1.410	2.040
6	.846	1.130	3.020	1.560	.970	2.370	2.270	1.470	2.890	2.020	1.340	1.910
7	1.320	1.620	3.030	1.430	.884	2.030	2.370	1.290	2.820	2.140	1.300	1.420
8	1.320	2.010	1.120	1.480	.935	2.380	2.400	1.290	2.460	2.230	1.300	.993
9	.846	2.190	1.040	1.360	1.000	2.530	2.520	1.220	2.520	2.530	1.340	1.010
10	1.530	1.500	1.060	1.510	.952	2.600	2.380	1.220	2.720	2.400	1.450	.998
11	1.020	1.090	1.350	1.390	1.190	2.720	2.370	1.250	2.890	2.330	1.400	1.050
12	.761	1.160	1.700	1.400	.999	2.910	2.360	1.350	2.750	2.270	1.460	.986
13	.759	1.070	1.170	1.810	1.100	2.320	2.370	1.350	2.730	2.240	1.500	.999
14	1.100	.925	1.320	1.650	.950	2.340	2.440	1.460	2.900	2.350	1.450	1.030
15	1.240	.822	1.200	1.620	1.100	2.480	2.580	1.530	2.830	2.320	1.380	1.100
16	1.650	1.410	.908	.854	1.060	2.620	2.630	1.770	2.580	2.260	1.400	1.820
17	1.880	1.420	.945	.758	1.210	2.590	2.400	1.800	2.260	2.150	1.450	1.830
18	1.350	.973	1.030	.658	1.160	2.570	2.970	1.690	2.380	2.070	1.380	1.760
19	1.530	.994	1.270	.721	1.320	2.780	2.920	1.720	2.760	2.170	1.430	1.330
20	1.310	.918	1.510	.763	2.070	2.710	2.560	1.990	2.840	2.140	1.440	1.380
21	1.420	.699	1.200	.790	2.650	2.580	2.320	1.790	2.300	2.120	1.290	1.340
22	1.860	.633	.749	.745	2.380	2.460	2.070	1.970	1.920	2.160	1.200	1.250
23	1.580	.666	.770	.830	2.100	2.280	1.980	2.000	1.960	2.360	1.200	1.240
24	1.420	.750	.773	.963	1.920	2.390	1.850	1.880	2.230	1.760	1.110	1.230
25	1.190	.857	.835	1.770	1.710	2.490	1.670	1.940	2.120	1.380	1.280	1.220
26	.976	3.020	1.620	2.960	1.730	2.590	1.690	1.910	2.240	1.280	1.190	1.220
27	1.050	3.860	1.360	2.700	1.680	2.350	1.550	2.160	2.260	1.250	1.040	1.380
28	1.160	3.740	.812	3.560	1.820	2.360	1.370	2.360	1.980	1.260	1.210	1.200
29	1.310	3.450	.778	3.660		2.370	1.410	2.270	2.010	1.260	1.200	1.220
30	1.170	3.490	.780	3.600		2.420	1.660	2.380	2.020	1.310	1.340	1.330
31	1.350		.773	3.460		2.490		2.350		1.180	1.680	

RADIOACTIVITY DETERMINATIONS

STATE CALIFORNIA
MAJOR BASIN COLORADO RIVER
MINOR BASIN LOWER COLORADO RIVER
STATION LOCATION COLORADO RIVER ABOVE PARKER DAM, ARIZONA-CALIFORNIA

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	12	60*	11	2	0	21	21	0	2	2									
10	26	60*	11	17	0	13	13	0	0	0									
11	9	60*	11	29	0	12	12	0	6	6									
11	30	60*	12	20	0	8	8	0	5	5									
12	14	60*	1	9	0	8	8	0	19	19									
12	28	60*	1	16	0	11	11	0	0	0									
1	11	61	1	31	0	12	12	0	0	0									
2	1	61*	2	17	0	6	6	0	0	0									
2	14	61*	3	3	0	6	6	0	13	13									
2	22	61	3	22	0	2	2	0	0	0									
3	15	61*	3	31	0	6	6	0	12	12									
3	29	61*	4	14	0	5	5	0	28	28									
4	14	61*	5	2	0	9	9	0	26	26									
4	26	61*	5	16	0	10	10	0	5	5									
5	3	61	6	1	1	7	8	0	0	0									
5	31	61	6	14	0	7	7	0	3	3									
6	14	61*	7	31	0	10	10	0	0	0									
6	21	61	8	28	0	8	8	9	0	9									
8	2	61*	8	31	0	10	10	0	10	10									
8	8	61	9	27	0	8	8	15	0	15									
9	13	61	10	20	2	4	6	0	38	38									
9	20	61	10	2	0	6	6	3	0	3									

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE CALIFORNIA
MAJOR BASIN COLORADO RIVER
MINOR BASIN LOWER COLORADO RIVER
STATION LOCATION COLORADO RIVER ABOVE
PARKER DAM, ARIZONA-CALIFORNIA 4

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	13	60	10	21	5140	190	30	160	0	8	10	1	1	7	1	3	2	1	6
11	17	60	11	23	4080	193	30	163	1	8	10	1	0	8	1	3	2	1	5
12	21	60	1	1	5130	194	42	152	1	10	12	1	1	8	2	4	3	0	12
1	31	61	2	7	5280	132	37	95	1	9	10	1	1	7	1	4	2	1	10
3	4	61	3	13	5060	179	43	136	0	9	15	4	1	9	1	6	2	1	10
4	13	61	4	20	5360	159	45	114	-	-	-	-	-	-	-	-	-	-	-
5	20	61	5	28	5110	185	84	101	-	-	-	-	-	-	-	-	-	-	-
5	20	61		*	10470	172	64	108	5	18	14	1	1	12	0	5	8	1	13
6	30	61	7	8	5270	187	52	135	-	-	-	-	-	-	-	-	-	-	-
8	8	61	8	16	5150	190	70	120	-	-	-	-	-	-	-	-	-	-	-
9	21	61	9	29	5500	162	37	125	-	-	-	-	-	-	-	-	-	-	-
9	21	61		*	15920	180	53	127	2	12	18	6	2	9	1	9	3	1	8

WATER QUALITY BASIC DATA

STATE CALIFORNIA

MAJOR BASIN COLORADO RIVER

MINOR BASIN LOWER COLORADO RIVER

STATION LOCATION COLORADO RIVER ABOVE PARKER DAM, ARIZONA-CALIFORNIA 4

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

DATE OF SAMPLE: MONTH	DAY	YEAR	ALGAE (Number per ml.): TOTAL	BLUE-GREEN: COCCOID	BLUE-GREEN: FILAMENTOUS	GREEN: COCCOID	GREEN: FILAMENTOUS	FLAGELLATES (Pigmented): GREEN	FLAGELLATES (Pigmented): OTHER	DIATOMS: CENTRIC	DIATOMS: PENNATE	INERT DIATOM SHELLS (No. per ml.): CENTRIC	INERT DIATOM SHELLS: PENNATE	DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*): FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE	OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES: PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	DOMINANT GENERA (See Introduction for Identification)
11	9	60	1200		20	220		330	110	50	490	20	220	91	50	8	30	89	10	92	*	10	70		4	4			---73
11	28	60	100						20		50	20	120	91	50	8	30	70	*	82	*	20		10	9	4			------
1	12	61	100			20		20			70		130											10	11	2			------
2	5	61	200			20			70		130	50	180										220	10		2			------
3	7	61	400			200		70	20	20	70		130												3	2			------
3	23	61	400	20		130			40	20	220	20	70											10	60	11			------
4	5	61	200		20	50		20			70	20	50										20	10	44	3			------
4	14	61								50			20											20	49				------
4	28	61	300			120			20	80	40												60			17			------
5	12	61	200			90			40		20		50												93	6			------
6	1	61	1000			460		80	190	170	80	20	120	69	40	92	10	8	10	52	10	40			24	4		1	--9--
6	14	61	700	20		270		40	120	40	210	20	20	8	60	69	10	91	*	27	*	30							------
6	29	61	1700		20	230	40	190	40	100	1080	40	80	8	90	91	10	92	*	89	*	*			74	4			-----3
7	19	61	800			270		80		80	390		20	8	80	69	10	94	*	26	*	10			104	1			-----3
8	8	61	600	20		190		40		20	350		80	8	90	94	*	57	*						44	2			-----3
8	19	61																							7	5			------
9	3	61	300			20		100	20		120			8	90	26	*								20	7			------
9	14	61	800			20		100	60		620		20	8	90										6				-----3

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE CALIFORNIA
MAJOR BASIN COLORADO RIVER
MINOR BASIN LOWER COLORADO RIVER
STATION LOCATION COLORADO RIVER ABOVE
PARKER DAM, ARIZONA-CALIFORNIA 4

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	5	60	24.6	-	7.8	-	-	-	-	-	85	110	344	5	5	280	.0	734	-
10	12	60	-	-	7.9	-	-	-	-	-	84	112	320	5	5	280	.0	687	-
10	19	60	21.1	-	7.9	-	-	-	-	-	83	112	348	5	5	280	.0	687	-
10	26	60	21.8	-	7.9	-	-	-	-	-	83	120	328	5	5	245	.1	598	-
11	2	60	20.0	-	8.0	-	-	-	-	-	84	111	336	10	5	290	.0	630	-
11	9	60	18.8	-	7.9	-	-	-	-	-	85	135	332	5	5	300	.0	621	-
11	16	60	18.3	-	7.9	-	-	-	-	-	91	122	328	5	5	305	.1	680	-
11	23	60	16.7	-	8.1	-	-	-	-	-	83	112	348	5	5	305	.0	670	-
11	30	60	15.5	-	7.9	-	-	-	-	-	85	128	328	5	5	320	.0	665	-
12	7	60	12.8	-	8.1	-	-	-	-	-	85	104	332	0	20	300	.0	663	-
12	14	60	12.2	-	8.2	-	-	-	-	-	86	118	328	0	20	300	.0	683	-
12	21	60	12.2	-	8.1	-	-	-	-	-	87	125	338	0	20	305	.0	663	-
12	28	60	11.7	-	7.9	-	-	-	-	-	85	122	330	0	20	300	.0	681	-
1	11	61	10.0	-	7.9	-	-	-	-	-	85	120	344	0	0	270	.0	667	-
1	18	61	10.6	-	7.8	-	-	-	-	-	73	124	340	0	0	290	.0	695	-
1	25	61	10.6	-	8.0	-	-	-	-	-	87	126	344	0	0	290	.0	690	-
2	1	61	11.1	-	7.7	-	-	-	-	-	81	122	336	0	0	280	.0	672	-
2	9	61	11.7	-	7.7	-	-	-	-	-	79	122	344	0	0	310	.0	672	-
2	14	61	12.8	-	7.6	-	-	-	-	-	81	123	332	0	0	310	.0	669	-
2	22	61	12.2	-	7.8	-	-	-	-	-	83	120	344	0	0	330	.0	695	-
2	28	61	28.3	-	-	-	-	-	-	-	78	127	-	-	-	-	-	-	-
3	7	61	12.8	-	7.8	-	-	-	-	-	81	126	332	0	0	275	.0	640	-
3	15	61	14.4	-	-	-	-	-	-	-	78	110	-	-	-	-	-	-	-
3	21	61	-	-	7.7	-	-	-	-	-	73	136	336	0	0	275	.0	688	-
3	23	61	15.5	-	7.6	-	-	-	-	-	77	124	332	0	0	275	.0	683	-
3	29	61	16.1	-	7.7	-	-	-	-	-	78	128	328	0	0	275	.0	663	-
4	6	61	17.2	-	7.7	-	-	-	-	-	80	124	336	5	0	255	.0	608	-
4	14	61	18.8	-	7.7	-	-	-	-	-	83	128	344	0	0	290	.0	672	-
4	20	61	19.4	-	7.7	-	-	-	-	-	81	124	344	0	0	300	.0	682	-
4	26	61	20.0	-	7.8	-	-	-	-	-	87	128	344	0	0	335	.0	673	-
5	3	61	21.1	-	8.2	-	-	-	-	-	86	126	352	0	0	285	-	689	-
5	17	61	22.8	-	-	-	-	-	-	-	86	131	-	-	-	-	-	-	-
5	22	61	23.9	-	7.3	-	-	-	-	-	87	125	340	0	0	288	.2	687	-
5	31	61	23.9	-	7.6	-	-	-	-	-	89	124	342	0	0	300	.0	676	-
6	7	61	23.9	-	-	-	-	-	-	-	88	128	336	0	0	300	.0	723	-
6	14	61	27.2	-	7.6	-	-	-	-	-	82	128	340	0	0	313	.0	736	-
6	21	61	28.2	-	8.0	-	-	-	-	-	86	130	340	5	0	300	.0	702	-
7	19	61	-	-	-	-	-	-	-	-	75	125	-	-	-	-	-	-	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE CALIFORNIA

MAJOR BASIN COLORADO RIVER

MINOR BASIN LOWER COLORADO RIVER

STATION LOCATION COLORADO RIVER ABOVE
PARKER DAM, ARIZONA-CALIFORNIA 4

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
8	2	61	28.3	-	-	-	-	-	-	-	86	124	-	-	-	-	-	-	-
8	7	61	29.4	-	7.9	-	-	-	-	-	82	106	420	5	0	255	.0	700	-
8	8	61	-	-	7.8	-	-	-	-	-	84	124	340	5	0	282	.0	687	-
9	13	61	-	-	7.2	-	-	-	-	-	86	120	332	0	0	285	.0	680	-
9	20	61	-	-	7.9	-	-				84	-	324	5	0	288	-	685	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station below Parker Dam
Operated by U.S. Geological Survey

STATE California

MAJOR BASIN Colorado River

MINOR BASIN Lower Colorado River

STATION LOCATION Colorado River above Parker Dam, Arizona-California

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	9.460	6.800	10.600	5.140	5.400	10.300	11.900	10.900	12.000	14.300	15.400	9.550
2	9.000	6.540	10.300	5.090	5.510	10.300	12.500	10.700	13.000	14.100	15.200	9.580
3	9.270	5.230	10.100	5.040	6.090	9.280	13.800	10.700	13.000	14.100	13.600	9.140
4	9.360	5.560	10.300	4.900	5.680	9.120	13.800	10.200	13.200	14.200	13.800	9.340
5	9.120	6.190	7.510	4.300	6.300	9.770	13.600	11.000	13.000	14.700	13.000	10.500
6	9.080	5.600	5.370	4.700	7.280	11.000	13.800	11.000	13.100	14.500	13.500	10.800
7	9.080	5.040	4.650	5.110	7.280	11.000	14.000	11.400	12.900	14.600	15.200	10.400
8	9.120	4.400	4.190	4.950	6.980	10.600	13.400	11.200	12.600	14.300	14.800	11.400
9	8.460	4.350	5.650	5.740	6.410	10.600	13.600	11.300	13.000	14.600	14.200	11.400
10	8.930	4.300	5.370	5.810	8.080	11.200	13.700	10.800	13.100	14.800	13.300	11.700
11	9.100	4.140	5.180	5.690	8.220	11.700	13.900	10.100	13.300	14.800	13.000	12.300
12	9.510	4.300	4.550	5.860	8.260	12.400	13.800	11.400	12.900	14.500	12.400	11.600
13	8.510	4.280	4.350	4.450	8.590	12.300	12.900	11.100	13.200	14.300	12.100	10.900
14	7.940	3.980	4.190	4.450	8.840	12.800	12.500	11.200	12.500	14.400	12.300	10.800
15	7.570	4.700	4.090	5.110	8.430	12.700	12.300	11.400	12.000	14.300	11.500	10.300
16	7.720	4.750	4.600	5.170	8.860	12.600	12.500	11.900	13.700	14.800	10.900	10.200
17	7.900	4.250	4.300	5.000	9.290	12.400	12.400	11.300	13.800	14.800	10.500	10.000
18	7.600	6.180	4.350	4.940	9.360	13.000	12.500	11.000	14.800	14.600	10.100	10.400
19	7.220	4.350	4.250	4.390	8.730	13.000	11.900	11.400	14.600	14.300	9.860	10.200
20	6.720	4.300	3.820	4.390	9.410	13.400	10.800	11.800	14.600	14.300	9.000	9.890
21	7.670	4.650	3.270	4.200	9.440	13.600	11.000	11.900	14.600	14.500	9.930	9.760
22	7.510	6.230	2.230	4.270	8.430	13.300	10.900	11.900	14.600	14.500	8.250	9.400
23	7.310	8.880	3.770	6.340	8.080	13.000	11.800	12.200	15.000	14.600	8.330	9.570
24	7.510	10.600	4.450	8.140	9.360	13.200	11.400	12.300	15.100	15.000	8.640	9.500
25	7.220	12.300	4.450	9.730	10.500	13.300	11.600	12.300	15.000	15.800	9.550	9.980
26	6.800	11.800	4.450	11.800	9.750	13.200	11.600	12.700	15.300	14.600	8.430	9.910
27	5.960	11.300	3.980	10.700	9.630	14.000	11.000	12.600	15.600	14.300	8.210	9.910
28	7.390	11.300	4.990	10.700	10.200	13.700	10.900	12.500	15.600	15.300	8.140	8.890
29	7.470	11.200	4.190	10.800		13.300	11.600	12.900	15.300	15.400	8.130	8.510
30	7.060	10.900	5.090	8.430		12.200	11.500	13.000	14.500	15.300	8.670	8.170
31	7.140		5.230	5.680		11.600		13.200		15.100	8.650	

RADIOACTIVITY DETERMINATIONS

STATE NEVADA
MAJOR BASIN COLORADO RIVER
MINOR BASIN LOWER COLORADO RIVER
STATION LOCATION COLORADO RIVER NEAR
BOULDER CITY, NEVADA 5

DATE SAMPLE TAKEN			DATE OF DETERMI-NATION		RADIOACTIVITY IN WATER						RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
					ALPHA			BETA			DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	11	60*	10	21	0	8	8	0	0	0							
10	25	60*	11	16	0	12	12	0	0	0							
11	8	60*	11	25	0	9	9	0	23	23							
11	29	60*	12	8	0	14	14	0	0	0							
12	13	60*	1	9	0	14	14	0	21	21							
12	27	60*	1	16	0	12	12	0	0	0							
1	10	61*	2	1	0	13	13	0	0	0							
1	31	61*	2	13	0	5	5	0	9	9							
2	14	61*	3	1	0	4	4	0	8	8							
2	28	61*	3	21	0	6	6	0	0	0							
3	14	61*	3	29	0	5	5	0	0	0							
3	27	61*	4	14	0	6	6	0	23	23							
4	11	61*	4	24	0	8	8	3	0	3							
4	25	61*	5	11	0	11	11	0	0	0							
5	9	61*	5	26	0	8	8	0	6	6							
5	29	61*	6	14	0	0	0	0	0	0							
6	13	61*	7	5	0	9	9	0	2	2							
6	27	61*	7	31	0	11	11	0	0	0							
7	11	61*	8	2	0	8	8	0	21	21							
8	1	61*	8	30	0	11	11	0	9	9							
8	15	61*	9	19	0	10	10	3	29	32							
8	29	61*	9	25	1	5	6	0	11	11							
9	13	61	10	23	0	8	8	0	40	40							
9	19	61	10	9	0	4	4	3	21	24							
9	26	61	10	7	0	9	9	8	24	32							

665709 O - 62 - 7

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE NEVADA

MAJOR BASIN COLORADO RIVER

MINOR BASIN LOWER COLORADO RIVER

STATION LOCATION COLORADO RIVER NEAR

BOULDER CITY, NEVADA 5

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
			TOTAL	BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR		COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	4	60	100	20		20					20		40	8	90	91	*	26	*			10	20						------
10	18	60	100							20	70	340	130	82	70	8	20	48	*			10							------
11	9	60											20	82	90	89	*												------
11	22	60																					20						------
12	6	60																											------
12	20	60																					20						------
1	3	61	200							20																			------
1	17	61								20		20	50																------
2	7	61								20	20	20																	------
2	21	61								20		90																	------
3	7	61						20				20	20																------
3	21	61	100			20				40	20	20	20										40						------
4	4	61																									1		------
4	18	61	100							60		20																	------
5	16	61								20																1			------
6	6	61	100			40				20															17	1			------
6	20	61	100			60																							------
7	5	61	200			40				150	20	20	60																------
7	18	61								20			20	8	60	95	10	91	10	61	*	20			2				------
8	7	61	100			40					80		20	8	80	46	10	69	10	47	*	10							------
8	21	61	100			20		20			60		100																------
9	5	61																							1				------
9	18	61	200							40	150	20	20										310						------

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE NEVADA

MAJOR BASIN COLORADO RIVER

MINOR BASIN LOWER COLORADO RIVER

STATION LOCATION COLORADO RIVER NEAR BOULDER CITY, NEVADA 5

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	4	60	10	24	5000	190	33	157	2	10	8	1	1	6	0	3	3	1	6
11	9	60	12	4	4884	193	30	163	1	9	9	0	1	8	0	3	2	1	5
12	22	60	1	19	5034	197	35	162	2	9	7	0	1	6	0	3	3	1	10
2	7	61	3	3	4888	220	37	183	1	9	10	0	0	9	1	4	3	1	9
3	21	61	4	11	5147	197	49	148	2	12	10	1	1	8	0	5	5	1	14
5	1	61	5	22	5665	161	58	103	-	-	-	-	-	-	-	-	-	-	-
6	15	61	6	26	5100	179	52	127	-	-	-	-	-	-	-	-	-	-	-
6	15	61		*	10765	169	55	114	2	17	12	1	1	10	0	4	6	1	13
7	17	61	7	28	5260	175	37	138	-	-	-	-	-	-	-	-	-	-	-
8	21	61	8	31	5233	175	52	123	-	-	-	-	-	-	-	-	-	-	-
9	26	61	10	12	5050	194	37	157	-	-	-	-	-	-	-	-	-	-	-
9	26	61		*	15543	181	42	139	2	12	9	1	1	7	0	3	3	1	12

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NEVADA

MAJOR BASIN COLORADO RIVER

MINOR BASIN LOWER COLORADO RIVER

STATION LOCATION COLORADO RIVER NEAR BOULDER CITY, NEVADA 5

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	4	60	17.0	6.9	8.0	-	-	2.9	4.6	.0	78	126	326	-	-	229	-	-	*1
10	10	60	16.0	8.5	8.0	-	-	2.9	4.4	-	74	108	324	-	-	219	-	-	4
10	18	60	14.5	6.4	8.0	-	-	2.8	4.4	.0	74	130	342	-	-	224	-	-	1
10	25	60	15.5	6.7	8.0	-	-	2.9	4.5	.0	74	126	330	-	-	221	-	-	1
11	1	60	15.5	6.5	8.0	-	-	2.9	4.7	.0	74	122	328	-	-	220	-	-	1
11	8	60	15.0	6.7	8.0	-	-	2.9	4.5	-	70	126	330	-	-	225	-	-	1
11	15	60	14.5	9.4	7.9	-	-	2.9	4.5	-	72	130	334	-	-	221	-	-	1
11	22	60	14.5	9.3	8.0	-	-	2.8	4.6	-	72	122	330	-	-	221	-	-	20
11	29	60	14.0	6.1	7.9	-	-	2.9	4.6	-	72	124	340	-	-	226	-	-	*1
12	6	60	14.0	8.0	7.9	-	-	2.9	4.6	-	72	126	330	-	-	226	-	-	1
12	13	60	14.0	5.9	8.1	-	-	3.0	4.7	-	72	124	342	-	-	225	-	-	3
12	20	60	13.0	5.7	8.2	-	-	3.0	4.7	-	74	126	340	-	-	225	-	-	1
12	27	60	13.0	7.4	8.3	-	-	2.9	4.6	-	74	124	348	-	-	216	-	-	1
1	3	61	13.5	5.6	8.2	-	-	2.9	4.7	.0	78	126	338	-	-	214	-	-	1
1	10	61	12.5	7.2	8.3	-	-	3.0	4.7	-	76	124	336	-	-	213	-	-	1
1	17	61	13.0	7.1	8.3	-	-	3.0	4.7	-	76	126	336	-	-	215	-	610	*1
1	24	61	12.5	8.5	7.9	-	-	3.0	4.7	-	76	126	338	-	-	220	-	-	*1
1	31	61	12.5	6.0	7.9	-	-	3.0	4.7	-	76	114	336	-	-	220	-	-	2
2	7	61	12.5	6.4	7.9	-	-	4.4	6.2	-	78	128	340	-	-	221	-	-	1
2	14	61	13.0	6.2	7.9	-	-	2.9	4.7	-	74	126	342	-	-	230	-	-	2
2	21	61	13.5	5.8	7.8	-	-	2.9	-	-	76	126	336	-	-	226	-	-	1
2	28	61	14.0	6.3	7.8	-	-	3.0	4.7	-	76	132	328	-	-	232	-	-	1
3	7	61	14.0	5.4	7.8	-	-	4.6	6.3	-	78	130	332	-	-	226	-	-	2
3	14	61	14.0	5.7	7.9	-	-	4.6	6.1	-	78	128	342	-	-	239	-	-	1
3	21	61	14.5	5.7	7.8	-	-	4.5	6.4	-	82	134	336	-	-	243	-	-	2
3	28	61	15.0	9.7	7.9	-	-	4.5	6.4	-	84	130	342	-	-	225	-	-	2
4	4	61	16.5	9.4	7.9	-	-	4.5	6.4	.0	84	132	340	-	-	223	-	-	2
4	11	61	16.0	12.4	7.9	-	-	4.5	6.3	-	88	132	344	-	-	225	-	-	1
4	18	61	15.5	7.5	7.9	-	-	4.6	6.5	-	88	130	336	-	-	214	-	-	1
4	25	61	14.5	7.6	7.9	-	-	4.6	6.4	-	82	128	342	-	-	226	-	-	1
5	2	61	15.0	8.1	7.9	-	-	4.6	6.5	-	84	124	334	-	-	232	-	-	*1
5	9	61	15.5	7.3	8.1	-	-	4.7	6.5	-	80	124	324	-	-	210	-	-	1
5	16	61	16.0	7.2	8.1	-	-	4.5	6.5	-	80	122	330	-	-	219	-	-	-
5	23	61	16.0	7.3	8.1	-	-	4.6	6.5	-	82	126	334	-	-	216	-	-	*1
5	29	61	14.5	7.0	8.0	-	-	4.6	-	-	84	128	336	-	-	218	-	-	-
6	6	61	15.0	6.7	8.2	-	-	4.8	6.4	-	82	128	334	-	-	219	-	-	-
6	13	61	15.0	6.5	8.2	-	-	4.7	6.8	-	82	128	336	-	-	212	-	-	-
6	20	61	15.5	6.7	8.1	-	-	4.8	7.0	-	80	128	338	-	-	215	-	-	13
6	27	61	15.0	6.7	8.0	-	-	4.7	6.8	-	82	128	128	-	-	216	-	-	*3

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NEVADA

MAJOR BASIN COLORADO RIVER

MINOR BASIN LOWER COLORADO RIVER

STATION LOCATION COLORADO RIVER NEAR BOULDER CITY, NEVADA 5

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	5	61	16.0	6.5	7.9	-	-	4.8	6.8	-	80	128	338	-	-	216	-	-	*3
7	11	61	15.0	6.5	8.0	-	-	4.8	6.7	-	80	126	334	-	-	219	-	-	*3
7	18	61	15.0	6.4	8.3	-	-	4.9	6.7	-	82	128	324	-	-	230	-	-	3
7	25	61	15.5	6.6	7.9	-	-	4.9	6.8	-	80	128	338	-	-	211	-	-	*3
8	1	61	15.0	6.3	7.9	-	-	4.9	6.8	-	80	128	322	-	-	211	-	-	*3
8	8	61	15.5	6.4	7.9	-	-	4.9	6.8	-	82	128	338	-	-	212	-	-	3
8	15	61	15.0	6.4	8.0	-	-	5.0	6.8	-	80	126	320	-	-	215	-	-	*3
8	22	61	15.0	-	8.0	-	-	4.9	6.8	-	82	124	322	-	-	212	-	-	*33
8	29	61	15.0	6.3	8.0	-	-	4.9	6.8	-	76	126	326	-	-	213	-	-	*33
9	5	61	15.0	6.1	8.0	-	-	4.9	6.8	-	80	128	326	-	-	216	-	-	*3
9	12	61	14.0	6.1	8.0	-	-	6.8	8.8	-	76	126	322	-	-	210	-	-	*3
9	19	61	15.0	6.0	8.0	-	-	6.7	8.7	-	76	128	320	-	-	219	-	-	*3
9	26	61	15.0	5.6	8.0	-	-	6.8	8.7	-	76	128	322	-	-	213	-	-	*3

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station below Hoover Dam
Data furnished by U.S. Bureau of Reclamation
through U.S. Geological Survey

STATE Nevada

MAJOR BASIN Colorado River

MINOR BASIN Lower Colorado River

STATION LOCATION Colorado River near Boulder City, Nevada

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	10.500	6.860	7.050	4.500	10.500	13.700	14.200	16.600	14.600	10.800	13.300	10.500
2	7.720	6.600	6.420	5.180	11.400	13.200	12.100	15.200	13.000	6.160	13.700	7.340
3	12.300	7.380	4.940	10.800	10.100	12.400	19.800	14.800	8.720	10.400	14.600	4.840
4	11.800	6.190	4.800	11.100	5.600	11.400	19.200	13.900	8.010	5.120	15.300	5.500
5	13.800	6.080	10.700	11.300	5.490	7.150	18.700	15.000	15.100	13.900	8.910	12.600
6	15.500	4.780	12.900	10.900	11.800	14.400	18.100	13.300	13.900	15.300	6.240	13.100
7	13.700	7.380	13.600	8.360	12.300	16.300	16.900	8.490	14.000	16.900	14.600	12.900
8	9.140	7.860	14.200	6.110	12.000	15.900	12.000	16.000	14.800	12.200	14.000	13.000
9	6.120	8.220	12.900	11.800	10.900	15.400	12.300	16.800	14.700	7.720	14.100	10.500
10	12.600	8.250	9.810	11.400	10.400	16.100	16.300	17.700	10.900	18.200	13.900	6.200
11	11.000	7.530	6.960	11.400	6.800	11.800	16.600	16.500	7.400	17.300	13.700	13.200
12	10.400	7.860	12.200	11.300	4.580	10.800	18.000	16.700	13.900	15.300	9.390	12.900
13	10.100	5.520	9.820	11.700	8.730	15.700	16.700	16.500	15.700	16.200	6.850	12.600
14	8.900	11.000	10.700	9.050	7.320	16.000	16.600	10.900	17.200	15.900	14.300	14.000
15	5.800	11.200	11.700	5.080	7.300	16.700	11.600	17.600	18.700	10.600	14.500	13.700
16	3.740	11.000	10.800	10.600	7.760	16.000	10.700	17.700	17.900	7.320	13.600	9.850
17	8.520	10.900	9.140	10.400	9.460	17.300	16.200	17.300	11.800	16.300	13.500	5.640
18	8.000	9.820	7.120	10.300	9.750	15.200	14.500	16.700	8.370	16.200	14.000	12.600
19	8.100	7.930	11.300	10.600	9.060	12.300	15.200	15.700	17.400	16.200	9.610	13.600
20	8.590	5.080	11.000	10.800	13.400	18.600	16.400	13.200	16.700	15.000	6.010	13.300
21	7.900	10.900	10.700	6.980	13.900	18.900	15.200	10.800	16.900	14.300	16.800	14.800
22	6.100	10.200	9.790	5.650	10.100	19.100	12.500	17.600	17.200	9.060	14.700	13.700
23	4.420	10.100	8.400	11.300	14.100	18.200	9.630	17.400	17.500	5.930	12.600	10.100
24	9.550	4.970	6.110	10.400	14.000	17.900	15.700	18.100	13.300	14.400	13.000	5.890
25	8.740	8.710	3.950	10.800	12.100	13.200	16.300	18.400	8.390	16.700	11.600	15.100
26	9.590	7.360	4.340	12.000	10.000	10.500	15.000	17.100	16.500	17.300	8.770	14.800
27	10.400	6.590	8.820	9.380	16.200	15.800	17.500	13.900	15.200	19.600	6.080	14.900
28	10.100	10.100	9.420	7.370	16.000	18.500	16.400	9.820	15.700	17.200	11.600	15.000
29	5.340	10.200	10.400	7.000		17.600	13.900	16.900	15.500	12.100	11.400	14.200
30	4.150	9.980	9.790	12.300		17.400	11.700	9.550	15.300	8.640	11.100	11.600
31	7.910		8.400	11.900		18.500		19.400		15.900	10.800	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE ARIZONA

MAJOR BASIN COLORADO RIVER

MINOR BASIN MIDDLE COLORADO RIVER

STATION LOCATION COLORADO RIVER AT

PAGE, ARIZONA 60

DATE SAMPLE TAKEN			DATE OF DETERMINATION		RADIOACTIVITY IN WATER — ALPHA			RADIOACTIVITY IN WATER — BETA			RADIOACTIVITY IN PLANKTON (dry) — DATE OF DETERMINATION		GROSS ACTIVITY		RADIOACTIVITY IN WATER — GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	3	60	10	18	22	22	44	25	0	25							
10	10	60	10	21	123	24	147	495	9	504							
10	17	60	11	1	112	16	128	238	0	238							
10	24	60	11	7	214	30	244	414	42	456							
10	31	60	11	18	32	30	62	81	5	86							
11	21	60	12	2	20	24	44	11	12	23							
11	28	60	12	15	6	17	23	68	51	119							
12	5	60	12	29	3	7	10	0	15	15							
12	12	60	12	27	0	17	17	4	0	4							
12	19	60	1	13	1	12	13	0	0	0							
12	27	60	2	14	0	22	22	0	39	39							
1	3	61	2	14	0	23	23	0	13	13							
1	9	61	1	27	1	17	18	7	44	51							
2	6	61	2	21	1	11	12	0	28	28							
2	13	61	3	6	1	12	13	0	0	0							
2	20	61	3	7	0	9	9	0	0	0							
2	27	61	3	14	108	8	116	542	21	563							
3	6	61	3	23	53	8	61	11	0	11							
3	13	61	3	31	10	7	17	13	0	13							
3	20	61	4	5	25	13	38	50	0	50							
3	27	61	4	14	12	27	39	40	11	51							
4	3	61	5	9	74	17	91	215	14	229							
4	10	61	4	28	110	7	117	790	30	820							
4	17	61	5	2	58	4	62	81	0	81							
4	24	61	5	17	28	8	36	31	13	44							
5	1	61	5	16	55	24	79	76	11	87							
5	8	61	6	1	39	11	50	23	0	23							
5	15	61	6	1	53	6	59	60	1	61							
5	22	61	6	22	25	7	32	60	16	76							
5	29	61	6	15	25	5	30	18	0	18							
6	5	61	6	29	19	2	21	45	0	45							
6	12	61	7	25	35	4	39	39	0	39							
6	19	61	7	17	18	2	20	16	0	16							
6	26	61	8	16	11	8	19	0	2	2							
7	5	61	8	2	45	4	49	190	9	199							
7	11	61	8	10	78	6	84	198	61	259							
7	17	61	9	7	15	16	31	64	32	96							
7	24	61	9	7	68	12	70	187	32	219							
7	31	61	8	31	48	6	54	128	0	128							
8	28	61	9	25	124	6	130	336	44	380							

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE ARIZONA

MAJOR BASIN COLORADO RIVER

MINOR BASIN MIDDLE COLORADO RIVER

STATION LOCATION COLORADO RIVER AT PAGE, ARIZONA

60

DATE SAMPLE TAKEN			DATE OF DETERMINATION		RADIOACTIVITY IN WATER							RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
					ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
9	5	61	10	5	121	13	134	617	77	694									
9	12	61	11	3	469	4	473	1527	56	1583									
9	18	61	10	23	234	26	260	1824	67	1891									
9	25	61	10	9	124	3	127	881	17	898									

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE ARIZONA
MAJOR BASIN COLORADO RIVER
MINOR BASIN MIDDLE COLORADO RIVER
STATION LOCATION COLORADO RIVER AT PAGE, ARIZONA

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFIERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	17	60	400	20		50		50		140	140		20																------
11	7	60	200			20					180		20																------
11	21	60	2000		20	40		20		1170	750	2180	680	92	30	11	10	2	10	31	10	50	20	10	1				4-97-
12	5	60	700			20		90	20	420	160	20	70	92	40	65	10	70	10	85	*	40	50						4-9--
12	12	60	300					70		180	70		40	92	50	82	10	26	10	70	*	30	40						------
1	3	61	400					50		200	140		50	92	60	37	10	26	*	33	*	30	20	10	1				------
1	16	61	2800					110		2640	20		20																--9--
2	6	61	300				20	110		130	70	20	50																------
2	20	61	700							450	290	20	50	92	50	85	20	51	10	82	*	10							--97-
3	6	61	1200					130		40	1020	20	1000	92	40	86	10	36	10	51	10	40							--7-3
3	13	61	1600					270		450	920	20	1210	92	30	85	10	65	10	51	10	50	50						7--73
3	27	61	4600			70		270		980	3260	40	1820	86	20	51	20	93	10	35	10	50							45973
4	3	61	600					20			580		310																----3
4	17	61	1500			20		20		80	1390	20	790																75-6-
5	1	61	2400			60		80		210	2050		1080	92	40	86	10	36	10	65	10	40							7-943
5	15	61	3000			40		150		660	2150	100	810	92	30	36	10	86	10	41	10	40							--973
6	5	61	2300		20					150	2090		910	92	30	46	10	12	*	78	*	50							7--66
6	19	61	2400			100		100		210	1880	100	890												2				7--66
7	5	61	1800			330		520		460	460		250	92	20	36	10	51	10	65	10	60							4893-
7	17	61	600			20				100	440	20	250																------
8	28	61																											------
9	18	61																											------

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE ARIZONA
MAJOR BASIN COLORADO RIVER
MINOR BASIN MIDDLE COLORADO RIVER
STATION LOCATION COLORADO RIVER AT PAGE, ARIZONA

60

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	10	60	10	17	4060	152	28	124	0	6	15	3	1	10	1	2	1	2	2
11	7	60	11	27	5410	117	25	92	0	6	9	1	1	7	0	3	2	1	4
1	3	61	1	23	5800	186	62	124	3	14	20	2	1	17	0	5	3	7	10
2	13	61	2	26	5000	134	27	107	1	6	10	1	1	8	0	3	1	2	4
3	17	61	3	28	5050	119	14	105	0	3	5	1	0	4	0	2	0	1	3
4	16	61	4	25	5000	109	17	92	0	4	10	2	1	7	0	2	0	1	0
6	5	61	6	15	4600	94	31	63	0	6	14	3	2	9	0	4	2	1	4
7	7	61	7	16	5000	-	21	*	0	4	11	2	1	8	0	2	1	1	2

*QUESTIONABLE RESULT-NOT REPORTED

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE ARIZONA

MAJOR BASIN COLORADO RIVER

MINOR BASIN MIDDLE COLORADO RIVER

STATION LOCATION COLORADO RIVER AT PAGE, ARIZONA

60

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	19.3	-	8.1	-	-	-	-	-	131	200	590	10	600	-	-	-	2000
10	10	60	18.4	-	7.9	-	-	-	-	-	92	278	564	-	8000	-	-	-	*1000
10	17	60	12.4	-	8.1	-	-	-	-	-	110	180	540	10	2100	-	-	-	9000
10	24	60	13.3	-	8.1	-	-	-	-	-	131	550	680	10	6000	-	-	-	10000
10	31	60	10.1	-	8.1	-	-	-	-	-	117	204	632	-	1200	-	-	-	280
11	7	60	12.1	-	8.0	-	-	-	-	-	121	240	660	8	1000	-	-	-	300
11	14	60	8.7	-	8.1	-	-	-	-	-	118	220	620	9	850	-	-	-	460
11	21	60	6.7	-	-	-	-	-	-	-	116	196	560	20	500	-	-	-	100
11	28	60	4.4	-	8.0	-	-	-	-	-	112	204	482	5	380	-	-	-	-
12	5	60	4.0	-	7.8	-	-	-	-	-	130	184	540	5	110	-	-	-	-
12	12	60	2.4	-	7.8	-	-	-	-	-	100	180	468	-	5	-	-	-	-
12	19	60	3.8	-	8.0	-	-	-	-	-	100	184	528	-	5	-	-	-	91
12	27	60	2.2	-	8.1	-	-	-	-	-	145	192	526	0	20	-	-	-	-
1	3	61	1.1	-	8.2	-	-	-	-	-	147	198	564	0	20	-	-	-	-
1	9	61	1.1	-	8.1	-	-	-	-	-	132	188	500	0	20	-	-	-	*100
1	16	61	2.2	-	8.1	-	-	-	-	-	153	197	500	2	20	-	-	-	1000
1	23	61	.9	-	8.1	-	-	-	-	-	159	198	532	3	22	-	-	-	*100
1	30	61	.9	-	8.2	-	-	-	-	-	138	188	460	3	25	-	-	-	*1
2	6	61	3.3	-	8.3	-	-	-	-	-	126	156	432	-	15	-	-	-	-
2	13	61	3.9	-	8.1	-	-	-	-	-	132	152	452	5	20	-	-	-	*100
2	20	61	7.2	-	7.9	-	-	-	-	-	134	154	446	3	15	-	-	-	*100
2	27	61	6.6	-	8.1	-	-	-	-	-	140	450	584	5	4500	-	-	-	1300
3	6	61	5.6	-	8.6	-	-	-	-	-	-	216	432	-	700	-	-	-	200
3	13	61	9.9	-	8.7	-	-	-	-	-	135	184	456	5	700	-	-	-	-
3	20	61	12.5	-	8.1	-	-	-	-	-	140	184	452	8	500	-	-	-	910
3	27	61	9.9	-	7.8	-	-	-	-	-	123	176	480	5	330	-	-	-	*1000
4	3	61	14.0	-	8.1	-	-	-	-	-	84	228	384	-	2000	-	-	-	3300
4	10	61	13.0	-	7.8	-	-	-	-	-	56	326	420	5	4400	-	-	-	-
4	17	61	13.5	-	8.3	-	-	-	-	-	58	196	332	-	1300	-	-	-	-
4	24	61	13.0	-	8.2	-	-	-	-	-	56	160	316	8	1000	-	-	-	1900
5	1	61	17.0	-	8.2	-	-	-	-	-	58	148	284	7	900	-	-	-	1200
5	8	61	16.1	-	8.2	-	-	-	-	-	39	208	300	5	880	-	-	-	3200
5	15	61	17.0	-	8.1	-	-	-	-	-	34	200	308	5	760	-	-	-	*100
5	22	61	20.0	-	8.1	-	-	-	-	-	28	136	224	3	700	-	-	-	*100
5	29	61	20.9	-	8.0	-	-	-	-	-	24	108	192	-	700	-	-	-	2800
6	5	61	20.0	-	8.1	-	-	-	-	-	20	112	204	6	900	-	-	-	2000
6	12	61	24.0	-	8.1	-	-	-	-	-	22	148	200	7	700	-	-	-	640
6	19	61	24.8	-	8.0	-	-	-	-	-	20	98	196	-	370	-	-	-	*100
6	26	61	28.0	-	7.8	-	-	-	-	-	28	96	192	-	500	-	-	-	1000

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Lees Ferry, Arizona
Operated by U.S. Geological Survey

STATE	Arizona
MAJOR BASIN	Colorado River
MINOR BASIN	Middle Colorado River
STATION LOCATION	Colorado River at Page, Arizona

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	3.760	5.530	1.520	4.850	5.200	5.470	8.000	10.100	35.800	11.500	3.030	8.250
2	3.650	5.390	1.420	4.830	5.200	5.390	8.210	9.530	34.400	10.700	3.420	6.000
3	3.550	5.410	1.840	4.700	5.170	5.200	8.540	9.450	35.200	9.760	3.080	5.470
4	3.460	5.500	2.990	4.520	5.090	5.250	8.500	10.300	38.400	9.910	4.450	4.930
5	3.380	5.580	3.970	4.250	5.110	5.300	8.360	12.000	39.200	9.800	4.500	4.550
6	3.340	5.550	4.550	3.970	5.280	5.470	8.180	14.200	37.400	8.750	7.940	5.170
7	3.360	5.580	4.930	3.740	5.360	5.330	7.830	16.100	33.500	8.390	8.830	4.880
8	3.300	6.030	5.220	3.630	5.360	5.300	9.230	17.800	31.500	7.900	9.080	5.880
9	3.650	6.570	5.410	3.570	5.300	5.300	11.100	17.200	29.600	7.520	7.940	16.100
10	3.920	6.030	5.610	3.420	5.170	5.360	10.300	15.500	27.600	7.350	6.800	21.900
11	4.830	6.000	5.790	3.380	5.140	5.440	10.700	13.900	27.600	7.350	6.030	24.700
12	4.750	5.940	5.700	3.420	5.140	5.390	11.600	13.200	28.000	6.380	5.220	24.300
13	5.250	5.910	5.440	3.460	5.140	5.200	10.700	12.700	29.200	6.030	4.830	18.700
14	5.220	6.030	5.200	3.630	5.170	4.930	10.300	12.500	30.300	5.910	3.900	13.200
15	6.970	6.000	5.010	3.790	5.170	4.800	9.950	13.200	29.900	5.820	3.550	11.300
16	7.690	5.850	4.880	3.970	5.170	4.720	9.610	16.100	28.800	5.500	3.440	10.500
17	6.900	5.820	4.780	4.180	5.110	4.800	9.490	19.300	28.000	5.030	3.440	9.870
18	7.380	5.820	4.780	4.320	5.060	5.280	9.160	18.700	26.500	4.700	4.320	9.910
19	8.360	5.910	4.720	4.480	5.010	5.610	8.320	16.900	25.100	4.380	5.610	11.300
20	8.110	5.940	4.680	4.550	5.060	5.820	7.830	16.600	24.300	4.080	6.190	12.500
21	8.220	5.850	4.600	4.650	5.360	6.100	7.690	17.800	22.900	3.830	6.480	14.200
22	7.900	5.850	4.500	4.720	7.070	6.100	8.220	18.700	21.600	3.760	7.550	16.300
23	6.870	5.880	4.350	4.780	9.190	6.540	8.540	20.600	20.300	3.650	6.030	12.700
24	6.480	5.820	4.230	4.750	10.700	6.740	8.830	23.600	19.000	3.480	5.200	10.100
25	6.350	5.880	4.280	4.720	10.300	6.670	9.720	25.400	18.100	3.340	4.550	9.910
26	6.130	6.100	4.380	4.650	7.830	6.670	10.900	27.300	16.900	3.240	4.250	10.900
27	6.030	6.100	4.500	4.700	7.280	6.640	12.000	29.200	15.500	3.220	4.230	13.400
28	5.880	5.970	4.600	4.780	6.000	7.010	12.000	30.700	14.200	3.160	4.550	15.000
29	5.820	5.880	4.680	4.960		7.940	11.300	31.100	12.900	3.140	5.970	13.900
30	5.700	4.620	4.800	5.140		8.430	10.700	32.700	12.200	3.180	7.240	12.500
31	5.550		4.850	5.220		8.360		34.800		3.200	8.040	

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE ARIZONA

MAJOR BASIN COLORADO RIVER

MINOR BASIN MIDDLE COLORADO RIVER

STATION LOCATION COLORADO RIVER AT PAGE, ARIZONA

60

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
7	5	61	25.6	-	7.9	-	-	-	-	-	32	310	280	-	1700	-	-	-	820
7	10	61	27.5	-	8.1	-	-	-	3.9	-	58	148	308	-	800	-	-	-	30
7	17	61	28.0	-	8.1	-	-	-	-	-	54	176	440	-	1200	-	-	-	100
7	24	61	27.0	-	8.2	-	-	-	-	-	61	330	520	-	2000	-	-	-	*100
7	31	61	26.5	-	7.8	-	-	-	-	-	76	118	470	-	800	-	-	-	720
8	28	61	26.0	-	8.0	-	-	-	-	-	81	180	648	-	2000	-	-	-	-
9	5	61	20.0	-	8.2	-	-	-	-	-	88	328	700	-	5000	-	-	-	-
9	11	61	18.7	-	8.1	-	-	-	-	-	25	130	400	0	32000	-	-	-	-
9	12	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400
9	18	61	22.4	-	7.8	-	-	-	-	-	53	172	596	-	16000	-	-	1926	-
9	25	61	18.0	-	7.6	-	-	-	-	-	49	140	450	0	10000	-	-	-	-

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE COLORADO

MAJOR BASIN COLORADO RIVER

MINOR BASIN UPPER COLORADO RIVER

STATION LOCATION COLORADO RIVER AT LOMA, COLORADO

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER GROSS ACTIVITY		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY				
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	10	60*	10	20	1	19	20	8	0	8								
10	24	60	11	17	2	31	33	2	40	42								
11	7	60*	11	23	2	13	15	0	0	0								
11	28	60*	12	8	0	14	14	0	0	0								
12	27	60	1	23	0	11	11	0	0	0								
1	9	61*	1	20	1	14	15	0	0	0								
1	30	61*	2	10	3	8	11	0	0	0								
2	13	61*	3	1	2	3	5	0	0	0								
2	27	61*	3	13	5	7	12	0	0	0								
3	14	61*	3	28	12	11	23	1	0	1								
3	27	61*	4	14	6	18	24	2	0	2								
4	10	61*	4	24	6	6	12	0	0	0								
4	24	61*	5	15	4	9	13	0	0	0								
5	8	61*	5	26	3	10	13	0	0	0								
5	29	61*	6	13	3	2	5	5	0	5								
6	12	61*	7	10	3	4	7	11	5	16								
6	26	61	8	17	4	3	7	3	0	3								
7	17	61*	8	25	0	4	4	20	33	53								
7	31	61	9	1	1	29	30	12	43	55								
8	14	61*	9	19	5	13	18	66	70	136								
8	28	61	9	25	0	10	10	27	27	54								
9	11	61	10	2	35	1	36	70	40	110								
9	25	61	11	7	38	0	38	200	53	253								

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE COLORADO
MAJOR BASIN COLORADO RIVER
MINOR BASIN UPPER COLORADO RIVER
STATION LOCATION COLORADO RIVER AT LOMA, COLORADO

6

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	10	60	2100			70				780	1270		1720	11	30	16	10	2	10	92	10	40	200	10	2				74753
10	24	60	2200			90		200	70	240	1630	40	1060	92	40	31	10	36	10	65	*	40	40						7-953
11	14	60	800		50					20	740	20		92	30	36	10	33	10	85	10	50	130		2		2		---7-
12	7	60	1600		90	20					1520		1450	92	20	51	20	36	10	31	10	40	270						7574-
2	7	61	2200							50	210	90	3460	92	20	51	10	85	10	93	10	50		10					-5753
2	20	61	2000							50	1940	20	2880	92	30	51	20	36	10	86	10	40							75743
3	6	61	6000					20		70	5940	70	3550	92	20	51	20	93	20	86	10	40			3		2		75753
3	20	61	5000		20	20		40		110	4780	20	150	35	20	31	20	51	10	65	10	40							75743
4	3	61	3600		20	20		110		270	3180	20	1980	86	20	51	20	92	10	93	10	40	20			1	2		45-73
4	20	61	2100					40		190	1860	20	1350	51	10	86	10	65	10	33	10	60					3		75753
5	2	61	9900			60				270	9520	100	4080	92	30	36	10	65	10	86	10	50							75743
6	5	61	900			40				120	700		150	2	10	65	10	51	10	31	10	60							-----
6	26	61	4600		60	40		290		370	3830		770	92	70	36	10	51	*	65	*	10			1			1	7594-
7	3	61	5500			40				180	5250	50	850	92	90	36	*								2				---7-
7	17	61	4000			80		270		1900	1760	80	600	92	50	26	10	5	*	65	*	30			2				4-777
8	8	61	2300			370		40		640	1280	80	250	92	30	75	10	36	10	69	10	50							78-7-
8	28	61	3000			290		60		660	1990	20	460	92	40	36	10	65	10	12	10	40							74743
9	11	61	1800			20		40		80	1680	20	150	92	20	15	10	36	10	46	10	50							7-7-3
9	25	61	300							40	290	40	710																-----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE COLORADO
MAJOR BASIN COLORADO RIVER
MINOR BASIN UPPER COLORADO RIVER
STATION LOCATION COLORADO RIVER AT
LOMA, COLORADO 6

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
4	13	61	4	24	3392	216	110	106	7	24	26	4	3	17	2	7	3	20	23

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE COLORADO

MAJOR BASIN COLORADO RIVER

MINOR BASIN UPPER COLORADO RIVER

STATION LOCATION COLORADO RIVER AT LOMA, COLORADO

6

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	3	60	16.0	7.2	8.1	1.2	-	-	-	.0	72	110	728	-	55	648	-	1701	40
10	24	60	13.0	7.7	8.2	3.0	-	-	-	1.3	144	220	642	-	47	592	-	1376	140
11	7	60	-	8.3	8.2	4.1	-	-	-	2.6	142	200	475	-	30	472	-	1215	170
11	21	60	3.0	8.9	8.2	5.1	-	-	-	2.5	138	100	328	-	16	452	-	1407	110
11	28	60	4.0	8.6	8.2	2.6	-	-	-	2.4	138	192	324	-	15	440	-	-	180
12	12	60	1.0	8.3	8.2	3.0	-	-	-	.2	120	196	400	-	32	440	-	1136	95
12	19	60	1.0	10.1	8.1	4.5	-	-	-	4.9	149	176	340	-	21	520	-	1198	8
12	27	60	1.0	9.2	8.2	1.8	-	-	-	3.0	134	176	336	-	14	404	-	1000	3
1	3	61	.0	10.1	8.4	6.5	-	-	-	4.0	153	216	460	-	27	496	-	1190	16
1	9	61	.0	9.8	8.3	4.1	-	-	-	3.6	166	180	464	-	26	472	-	1198	25
1	16	61	.0	10.1	8.1	3.9	-	-	-	3.4	140	192	320	-	34	680	-	998	74
1	30	61	.0	8.0	8.4	1.4	-	-	-	3.3	150	168	352	-	21	420	-	1062	98
2	7	61	.0	9.5	8.3	3.1	-	-	-	4.3	124	148	320	-	25	404	-	1013	160
2	13	61	2.0	8.9	8.1	4.3	-	-	-	3.8	123	160	408	-	66	452	-	1053	160
2	20	61	3.0	9.8	8.4	4.8	-	-	-	3.2	134	160	288	-	55	472	-	1051	26
2	27	61	2.0	-	8.3	-	-	-	-	4.0	152	176	428	-	17	404	-	1025	1
3	14	61	8.0	7.8	8.4	-	-	-	-	4.1	134	160	332	-	470	496	-	1126	220
3	20	61	8.0	7.6	8.3	6.2	-	-	-	2.4	112	140	320	-	450	360	-	884	550
4	17	61	11.0	7.8	8.4	5.9	-	-	-	2.0	120	145	300	-	123	340	-	920	310
4	24	61	8.0	7.8	8.1	4.4	-	-	-	.8	80	132	165	-	370	300	-	734	340
5	8	61	13.0	7.0	8.2	2.3	-	-	-	1.5	62	112	288	-	270	264	-	618	330
5	15	61	13.0	6.0	8.1	2.6	-	-	-	1.0	78	92	240	-	320	132	-	454	60
5	22	61	15.0	6.4	8.1	2.8	-	-	-	.9	60	104	280	-	270	140	-	513	120
6	5	61	13.0	7.2	8.4	1.2	-	-	-	.5	50	100	220	-	90	144	-	378	100
6	12	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48
6	19	61	14.0	6.8	8.3	3.8	-	-	-	.8	50	93	208	-	120	14	-	380	-
7	10	61	23.0	5.0	8.6	1.0	-	-	-	.1	88	176	460	-	80	620	-	1244	36
7	31	61	26.0	5.6	8.6	1.6	-	-	-	.2	98	184	448	-	120	600	-	-	120
8	8	61	24.0	4.8	8.4	2.8	-	-	-	.6	124	172	490	-	170	560	-	1282	110
8	14	61	22.0	4.6	8.3	3.0	-	-	-	.4	146	164	460	-	110	498	-	1164	21
8	28	61	22.0	5.1	8.5	-	-	-	-	.2	140	200	668	-	330	680	-	1632	120
9	11	61	18.0	7.8	8.7	3.2	-	-	-	.2	80	140	328	-	1000	472	-	1017	220
9	25	61	13.0	7.8	8.6	3.0	-	-	-	.3	78	130	320	-	950	450	-	1106	260

665709 O - 62 - 8

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station near Colorado-Utah State Line
Operated by U.S. Geological Survey

STATE	Colorado
MAJOR BASIN	Colorado River
MINOR BASIN	Upper Colorado River
STATION LOCATION	Colorado River at Loma, Colorado

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	1.980	2.800	2.300	2.150	2.440	2.190	2.320	2.990	18.300	3.040	1.960	2.410
2	1.960	2.990	2.460	2.130	2.560	2.230	2.260	4.200	18.100	3.110	2.200	2.340
3	1.900	2.920	2.660	2.190	2.540	2.360	2.240	5.620	17.000	2.920	2.460	2.730
4	1.880	3.010	2.900	1.950	2.540	2.400	2.340	6.910	14.300	2.740	2.810	3.590
5	1.850	2.850	3.100	1.910	2.480	2.380	2.430	7.570	11.900	2.660	2.850	4.140
6	1.870	2.930	3.040	1.850	2.480	2.380	2.860	6.670	10.800	2.430	2.350	4.200
7	1.920	2.990	2.490	2.000	2.460	2.380	3.130	5.330	10.800	2.290	2.120	4.160
8	1.880	3.100	2.290	2.200	2.410	2.280	3.240	4.540	11.100	2.240	1.730	4.160
9	1.980	3.100	2.260	2.400	2.480	2.190	3.150	3.790	12.200	2.340	1.500	6.320
10	2.080	3.040	2.610	2.500	2.380	2.150	2.880	3.320	14.100	2.380	1.340	4.740
11	2.260	2.900	2.900	2.600	2.320	2.100	2.610	3.710	15.100	2.160	1.500	5.120
12	2.340	2.810	2.950	2.600	2.220	2.200	2.460	6.200	14.100	1.950	1.500	4.830
13	2.380	2.780	2.730	2.400	2.240	2.400	2.290	9.400	13.600	1.780	1.520	4.410
14	2.520	2.920	2.640	2.300	2.260	2.220	2.230	9.940	12.200	1.590	1.580	3.850
15	2.760	2.900	2.510	2.300	2.160	2.260	2.340	7.930	11.000	1.490	1.590	3.630
16	2.850	2.850	2.340	2.400	2.160	2.410	2.320	6.340	10.400	1.420	1.640	3.350
17	2.920	2.900	2.060	2.400	2.400	2.760	2.090	5.740	9.850	1.450	1.760	3.340
18	2.880	2.740	1.980	2.520	2.430	2.990	1.880	6.000	9.340	1.590	1.960	3.850
19	2.780	2.710	2.340	2.510	2.510	3.130	1.700	6.880	8.830	1.570	2.090	4.260
20	2.860	2.850	2.610	2.490	2.380	2.860	1.950	9.110	8.170	1.550	1.960	4.110
21	2.950	3.040	2.690	2.400	2.430	2.800	2.850	11.300	7.870	1.610	1.900	4.300
22	2.930	2.830	2.690	2.280	2.430	2.620	3.750	11.100	7.630	1.630	1.760	5.090
23	2.850	2.730	2.760	2.230	2.430	2.640	3.350	11.300	6.790	1.690	1.650	6.880
24	2.810	2.800	2.830	2.260	2.380	2.740	3.430	15.100	5.900	1.860	1.590	7.630
25	2.740	2.780	2.690	2.480	2.350	2.780	3.490	15.200	5.330	1.880	2.020	7.360
26	2.760	2.740	2.560	2.490	2.240	2.800	3.040	14.900	4.920	1.640	2.220	6.220
27	2.690	2.760	2.540	2.570	2.340	2.920	2.410	16.000	4.450	1.530	2.230	5.820
28	2.640	2.760	2.520	2.460	2.280	2.880	1.980	17.000	3.890	1.420	2.300	5.820
29	2.850	2.850	2.410	2.490		2.540	1.760	18.100	3.610	1.460	2.290	5.940
30	2.830	2.590	2.340	2.340		2.380	1.990	17.400	3.340	1.590	2.260	6.220
31	2.990		2.130	2.360		2.320		18.700		1.820	2.380	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE OREGON
MAJOR BASIN PACIFIC NORTHWEST
MINOR BASIN COLUMBIA RIVER BELOW YAKIMA RIVER
STATION LOCATION COLUMBIA RIVER AT
CLATSKANIE, OREGON 7

Date Sample Taken Mo.	Day	Year	Date of Determination Month	Day	Radioactivity in Water: Alpha Suspended μμc/l	Alpha Dissolved μμc/l	Alpha Total μμc/l	Beta Suspended μμc/l	Beta Dissolved μμc/l	Beta Total μμc/l	Radioactivity in Plankton (dry): Date of Determination Mo.	Day	Gross Activity Alpha μμc/g	Gross Activity Beta μμc/g	Radioactivity in Water: Gross Activity Suspended μμc/l	Dissolved μμc/l	Total μμc/l
10	3	60	10	17	-	-	-	3	191	194							
10	10	60	10	31	-	-	-	9	207	216							
10	17	60	10	31	-	-	-	13	165	178							
10	24	60	11	14	0	1	1	5	0	5							
10	31	60	11	21	-	-	-	3	138	141							
11	7	60	11	25	-	-	-	6	161	167							
11	14	60	12	16	-	-	-	6	155	161							
11	21	60	12	16	0	1	1	23	96	119							
11	28	60	12	12	0	1	1	0	10	10							
12	5	60	12	29	-	-	-	5	72	77							
12	12	60	12	30	-	-	-	30	178	208							
12	19	60	1	25	-	-	-	0	80	80							
12	27	60	1	18	-	-	-	30	143	173							
1	3	61	1	25	-	-	-	0	148	148							
1	9	61	1	31	-	-	-	7	68	75							
1	16	61	2	2	-	-	-	36	191	227							
1	23	61	2	6	0	0	0	66	211	277							
1	30	61	2	15	-	-	-	43	183	226							
2	6	61	3	1	-	-	-	23	93	116							
2	13	61	3	2	-	-	-	31	17	48							
2	20	61	3	8	-	-	-	15	41	56							
2	27	61	3	20	0	0	0	17	33	50							
3	6	61	3	29	-	-	-	22	41	63							
3	13	61	3	31	-	-	-	16	57	73							
3	20	61	4	14	-	-	-	20	29	49							
3	27	61	4	13	0	0	0	33	33	66							
4	3	61	4	19	-	-	-	34	104	138							
4	10	61	4	28	-	-	-	16	81	97							
4	17	61	5	4	-	-	-	35	93	128							
4	24	61	5	16	0	1	1	18	101	119							
5	1	61	5	24	0	0	0	20	74	94							
5	8	61	5	31	-	-	-	18	55	73							
5	15	61	6	2	-	-	-	39	85	124							
5	22	61	6	15	-	-	-	29	55	84							
5	29	61	6	27	-	-	-	26	28	54							
6	5	61	7	17	-	-	-	14	9	23							
6	12	61	7	6	-	-	-	15	10	25							
6	19	61	7	28	-	-	-	0	13	13							
6	26	61	8	17	0	0	0	5	17	22							

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE OREGON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN COLUMBIA RIVER BELOW YAKIMA RIVER

STATION LOCATION COLUMBIA RIVER AT CLATSKANIE, OREGON 7

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER										RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA					DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL					ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l			MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
7	3	61	8	1	-	-	-	6	31	37										
7	10	61	8	4	-	-	-	13	62	75										
7	19	61	8	4	-	-	-	45	54	99										
7	24	61	8	30	0	0	0	18	58	76										
8	2	61	9	1	-	-	-	23	67	90										
8	7	61.	9	8	-	-	-	21	126	147										
8	14	61	9	22	-	-	-	0	63	63										
8	21	61	9	26	-	-	-	2	78	80										
8	28	61	9	21	1	1	2	2	117	119										
9	5	61	10	3	-	-	-	6	94	100										
9	14	61	10	27	-	-	-	5	43	48										
9	18	61	10	12	-	-	-	20	113	133										
9	25	61	10	9	0	0	0	8	80	88										

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE OREGON
MAJOR BASIN PACIFIC NORTHWEST
MINOR BASIN COLUMBIA RIVER BELOW YAKIMA RIVER
STATION LOCATION COLUMBIA RIVER AT
CLATSKANIE, OREGON

7

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	18	60	700		20	20			70	420	180	180	180	82	20	45	10	56	10	58	10	50	150		11	1			--9-7
11	1	60	500			20			50	250	140	650	670	82	10	83	10	45	10	56	10	50	20		1	1			-----
11	14	60	500						20	220	200	70	240	82	20	47	10	45	10	56	10	50		20	1	1			--9--
12	6	60	200			20		20		130	70	20	200	2	10	92	10	45	10	82	10	70	90				3		-----
12	19	60	200							70	90	110	150	92	10	62	10	47	10	45	10	70	70	10	1				-----
12	27	60	100					20	20	70	20	20	130	47	10	82	10	61	10	92	10	70	50		1				-----
1	9	61	100							70		50	130	82	10	2	10	46	10	92	10	70	130						-----
1	31	61	100						20	50	50	90	450	47	10	9	10	80	10	92	10	60		10		2			-----
2	13	61	300							50	250	110	600	47	20	45	20	92	20	58	*	40	20						-----
2	28	61	100					20		50	20	90	200	92	10	47	10	45	10	58	10	70			2				-----
3	13	61	300					20		110	200	290	250	61	10	92	10	95	10	9	10	60	20						-----
3	28	61	600					20	20	220	380	70	200	92	10	47	10	9	10	61	10	70	90	10					----7
5	15	61	3100					20		870	2170	220	630	47	30	80	10	92	10	61	10	40							3-9-7
5	31	61	6100			20		20		2280	3790	410	1700	61	30	9	30	95	10	92	10	30			6	1	1		34977
6	19	61	4100					80	20	3620	410	830	540	47	10	92	10	62	10	36	10	60			2				--9--
6	27	61	1000			20		40		380	510	180	740	61	20	84	20	47	10	92	10	40			27	9			3-9--
7	10	61	7600			110		20		6570	890	2320	870	47	50	95	10	92	10	61	10	30			18	12			3497-
7	17	61	4700		40	250		80		3620	750	1330	640	47	40	84	40	61	10	95	*	20			123	18			38977
8	2	61	2100		130	80				700	1160	500	750	47	60	56	20	45	10	92	10	20			392	7			3--77
8	21	61	1200			70	20			780	340	420	540	58	50	47	30	56	*	30	*	10			168	13			----7
8	29	61	2600	20		270	90	40		1660	520	230	290	58	40	47	30	83	10	56	10	20		20	76	13			7-9-7
9	11	61	3600			270	20	40		.2730	520	600	230	47	40	56	20	82	10	58	10	20			147	10			4-9-7

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE OREGON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN COLUMBIA RIVER BELOW YAKIMA RIVER

STATION LOCATION COLUMBIA RIVER AT CLATSKANIE, OREGON

7

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	18	60	10	26	2090	287	49	238	1	10	21	4	2	15	0	8	3	1	5
11	1	60	11	10	3900	83	15	68	0	2	9	2	1	6	0	2	1	0	1
12	6	60	12	15	5820	81	23	58	0	4	10	1	1	8	0	3	1	0	5
12	27	60	1	6	4370	100	37	63	2	6	11	1	1	8	1	7	2	0	9
1	31	61	2	9	4780	111	31	80	1	6	11	1	1	8	1	5	2	0	6
2	28	61	3	9	4920	-	*	76	-	-	-	-	-	-	-	-	-	-	-
3	28	61	4	6	4880	102	39	63	1	10	11	2	1	8	0	5	3	0	8
4	25	61	5	4	4970	99	47	52	2	11	14	2	2	9	1	7	5	0	8
5	31	61	7	14	3300	132	42	90	0	11	13	2	1	9	1	5	3	1	9
8	2	61	8	17	4700	120	51	69	1	11	20	4	2	13	1	7	4	0	8
8	29	61	9	8	4420	96	22	74	0	4	11	2	1	7	1	3	1	1	2

*LABORATORY ACCIDENT

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE OREGON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN COLUMBIA RIVER BELOW YAKIMA RIVER

STATION LOCATION COLUMBIA RIVER AT

CLATSKANIE, OREGON 7

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 mL
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	-	-	7.9	-	-	-	-	-	8	70	96	5	5	23	.0	115	-
10	10	60	17.5	-	7.6	-	-	-	-	-	8	68	88	5	5	19	.0	95	-
10	18	60	-	9.5	7.5	1.8	-	-	-	.5	7	58	67	5	5	19	.0	104	1700
10	24	60	-	-	7.6	-	-	-	-	-	7	64	112	5	5	18	.1	106	-
10	31	60	13.0	-	7.6	-	-	-	-	-	7	62	80	5	5	18	.1	109	-
11	1	60	13.9	9.7	7.6	1.1	-	.2	1.6	.7	6	59	66	5	4	20	.0	115	2100
11	7	60	11.0	-	7.4	-	-	-	-	-	7	62	72	5	5	20	.1	111	-
11	21	60	-	-	7.6	-	-	-	-	-	5	36	48	15	5	14	.0	-	-
11	28	60	-	-	7.8	-	-	-	-	-	7	20	52	30	170	10	.0	-	-
12	6	60	-	11.5	7.3	2.0	-	.7	2.7	.8	5	40	43	12	9	2	.0	88	2300
12	12	60	5.5	-	7.7	-	-	-	-	-	7	58	72	5	0	20	.0	-	-
12	19	60	5.2	-	7.7	-	-	-	-	-	7	64	70	5	0	19	.1	105	-
12	27	60	-	-	7.8	-	-	-	-	-	8	40	70	5	0	19	.0	107	1100
1	3	61	-	-	8.0	-	-	-	-	-	6	60	82	10	5	24	-	89	-
1	9	61	-	-	7.4	-	-	-	-	-	6	46	62	5	0	16	.1	72	-
1	16	61	-	-	7.8	-	-	-	-	-	6	52	58	0	0	19	.0	96	-
1	31	61	-	12.5	7.6	3.5	-	-	-	.2	6	68	74	15	7	22	.2	138	-
2	6	61	-	7.8	-	-	-	-	-	-	6	44	52	0	20	18	.1	90	-
2	13	61	-	-	8.3	-	-	-	-	-	4	40	-	10	150	30	.0	75	-
2	22	61	-	-	7.8	-	-	-	-	-	6	34	40	5	0	15	.0	-	-
2	27	61	-	-	-	-	-	-	-	-	-	36	-	10	55	15	.0	-	-
2	28	61	-	12.5	7.5	3.5	-	-	-	.2	3	32	34	12	21	13	.1	94	2800
3	6	61	-	-	7.6	-	-	-	-	-	14	-	58	10	0	14	.0	-	-
3	13	61	-	-	7.1	-	-	-	-	-	-	-	48	10	10	-	-	71	-
3	28	61	9.8	11.6	7.3	3.3	-	-	-	.5	4	39	55	7	20	15	.0	93	1400
4	10	61	-	-	7.7	-	-	-	-	-	8	-	84	-	-	-	-	-	-
4	25	61	9.9	11.2	7.2	2.3	-	-	-	.2	3	43	65	10	5	18	.1	88	760
5	1	61	-	-	7.6	-	-	-	-	-	8	48	-	-	-	18	-	-	-
5	8	61	-	-	7.6	-	-	-	-	-	104	-	104	10	-	43	.1	-	-
5	15	61	-	-	7.7	-	-	-	-	-	7	56	68	10	-	16	.0	83	-
5	22	61	-	-	7.3	-	-	-	-	-	-	-	68	10	-	10	.1	-	-
5	31	61	14.5	11.5	6.7	2.5	-	-	-	.3	3	34	53	5	24	20	.2	70	3600
6	5	61	-	-	7.5	-	-	-	-	-	-	-	-	10	-	28	-	-	-
6	16	61	-	-	6.9	-	-	-	-	-	6	50	-	5	-	10	-	-	-
6	19	61	-	-	7.2	-	-	-	-	-	6	-	68	5	-	14	-	-	-
6	27	61	17.7	11.1	7.2	3.4	-	-	-	1.1	3	40	72	7	9	17	.0	90	2900
7	10	61	-	-	8.0	-	-	-	-	-	4	54	72	10	0	-	-	-	-
7	19	61	-	-	8.0	-	-	-	-	-	8	52	100	20	0	43	-	-	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE OREGON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN COLUMBIA RIVER BELOW YAKIMA RIVER

STATION LOCATION COLUMBIA RIVER AT CLATSKANIE, OREGON 7

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	24	61	-	-	7.8	-	-	-	-	-	6	56	76	5	0	11	-	-	-
8	1	61	-	-	8.3	-	-	-	-	-	6	-	-	5	-	-	.0	-	-
8	2	61	21.6	8.3	7.6	1.2	-	-	-	1.0	3	51	82	10	9	18	.2	105	1400
8	7	61	-	-	8.1	-	-	-	-	-	8	56	80	5	-	16	.2	-	-
8	14	61	-	-	7.7	-	-	-	-	-	5	54	72	5	0	11	.1	-	-
8	21	61	-	-	7.5	-	-	-	-	-	-	-	-	5	0	-	-	91	-
8	28	61	-	-	7.6	-	-	-	-	-	-	-	-	-	-	-	-	84	-
8	29	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1300
9	5	61	-	-	7.6	-	-	-	-	-	4	56	76	5	0	18	-	-	-
9	14	61	-	-	7.2	-	-	-	-	-	-	-	84	10	-	18	.2	88	-
9	18	61	-	-	7.1	-	-	-	-	-	4	62	88	10	0	21	.0	-	-
9	25	61	-	-	7.1	-	-	-	-	-	-	-	-	10	0	17	-	93	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Computed Data for Clatskanie, Oregon
Data Supplied by U.S. Geological Survey

STATE Oregon

MAJOR BASIN Pacific Northwest

MINOR BASIN Columbia River below Yakima River

STATION LOCATION Columbia River at Clatskanie, Oregon

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	131.000	166.000	231.000	158.000	267.000	351.000	258.000	311.000	656.000	417.000	181.000	132.000
2	120.000	172.000	218.000	149.000	282.000	383.000	267.000	340.000	674.000	395.000	186.000	146.000
3	127.000	168.000	213.000	151.000	323.000	369.000	317.000	321.000	706.000	375.000	176.000	125.000
4	119.000	162.000	207.000	148.000	305.000	341.000	335.000	327.000	741.000	356.000	169.000	122.000
5	120.000	156.000	202.000	153.000	294.000	309.000	313.000	302.000	763.000	347.000	163.000	131.000
6	117.000	146.000	188.000	211.000	314.000	322.000	319.000	279.000	766.000	338.000	162.000	134.000
7	123.000	138.000	187.000	255.000	341.000	341.000	298.000	307.000	785.000	313.000	158.000	131.000
8	121.000	136.000	168.000	268.000	329.000	311.000	275.000	309.000	799.000	306.000	152.000	121.000
9	127.000	131.000	158.000	276.000	308.000	287.000	278.000	311.000	777.000	294.000	147.000	122.000
10	126.000	134.000	147.000	250.000	471.000	273.000	278.000	320.000	773.000	283.000	139.000	121.000
11	117.000	155.000	148.000	223.000	563.000	285.000	272.000	362.000	771.000	276.000	143.000	124.000
12	119.000	166.000	158.000	197.000	623.000	293.000	241.000	372.000	762.000	265.000	148.000	109.000
13	116.000	167.000	162.000	189.000	599.000	312.000	265.000	389.000	745.000	268.000	158.000	120.000
14	120.000	164.000	157.000	197.000	488.000	384.000	265.000	394.000	714.000	264.000	150.000	118.000
15	116.000	169.000	155.000	225.000	478.000	410.000	258.000	386.000	723.000	252.000	156.000	117.000
16	117.000	231.000	149.000	315.000	447.000	396.000	259.000	391.000	718.000	244.000	162.000	112.000
17	130.000	276.000	155.000	300.000	412.000	379.000	246.000	409.000	690.000	239.000	146.000	103.000
18	125.000	315.000	172.000	255.000	382.000	352.000	252.000	421.000	677.000	227.000	138.000	110.000
19	119.000	322.000	242.000	223.000	384.000	326.000	253.000	446.000	685.000	233.000	143.000	102.000
20	114.000	356.000	249.000	206.000	393.000	317.000	259.000	454.000	684.000	233.000	133.000	99.800
21	110.000	418.000	228.000	200.000	440.000	309.000	236.000	458.000	661.000	233.000	131.000	108.000
22	116.000	325.000	217.000	192.000	548.000	308.000	240.000	472.000	637.000	238.000	122.000	106.000
23	116.000	286.000	192.000	176.000	498.000	309.000	265.000	497.000	608.000	230.000	120.000	107.000
24	124.000	358.000	180.000	176.000	460.000	316.000	246.000	515.000	579.000	224.000	126.000	100.000
25	129.000	537.000	172.000	176.000	449.000	312.000	245.000	519.000	550.000	222.000	117.000	101.000
26	129.000	468.000	169.000	173.000	415.000	308.000	256.000	551.000	532.000	219.000	135.000	101.000
27	150.000	385.000	177.000	171.000	386.000	322.000	263.000	594.000	509.000	226.000	129.000	102.000
28	174.000	312.000	167.000	170.000	369.000	321.000	255.000	612.000	485.000	223.000	133.000	100.000
29	172.000	274.000	163.000	170.000		295.000	244.000	612.000	454.000	205.000	138.000	105.000
30	166.000	253.000	163.000	179.000		275.000	264.000	610.000	434.000	193.000	142.000	103.000
31	160.000		153.000	236.000		260.000		614.000		175.000	133.000	

Computed as sum of Columbia River near The Dalles, Oregon plus 4 times the sum of Klickitat River near Pitt, Washington and Hood River and Conduit near Hood River, Oregon, plus Willamette River at Salem, Oregon plus 4.5 times the Cowlitz River at Castle Rock, Washington.

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE: OREGON

MAJOR BASIN: PACIFIC NORTHWEST

MINOR BASIN: COLUMBIA RIVER BELOW YAKIMA RIVE[R]

STATION LOCATION: COLUMBIA RIVER AT BONNEVILLE, OREGON

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER							
			DATE OF DETERMINATION		ALPHA			BETA		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l
10	10	60	10	31	-	-	-	8	287	295
10	24	60	11	7	0	2	2	13	238	251
11	14	60	11	30	-	-	-	11	263	274
11	21	60	12	2	0	1	1	21	316	337
12	12	60	1	6	-	-	-	26	266	292
12	27	60	1	17	1	2	3	27	401	428
1	9	61	2	6	-	-	-	50	228	278
1	23	61	2	8	0	1	1	83	288	371
2	13	61	3	6	-	-	-	69	135	204
2	20	61	3	7	-	-	-	104	142	246
3	6	61	3	24	-	-	-	80	186	266
3	20	61	4	7	-	-	-	53	166	219
4	10	61	5	4	-	-	-	48	174	222
4	24	61	5	16	1	0	1	40	192	232
5	8	61	5	25	-	-	-	52	152	204
5	22	61	6	15	-	-	-	23	76	99
6	12	61	7	21	-	-	-	16	22	38
6	26	61	8	17	0	0	0	24	19	43
7	10	61	8	8	-	-	-	8	89	97
7	24	61	9	7	0	1	1	11	63	74
8	7	61	9	8	-	-	-	0	72	72
8	21	61	9	4	-	-	-	19	136	155
9	11	61	10	27	-	-	-	5	123	128
9	25	61	10	9	0	0	0	14	277	291

RADIOACTIVITY IN PLANKTON (dry)			
DATE OF DETERMINATION		GROSS ACTIVITY	
		ALPHA	BETA
MO.	DAY	μμc/g	μμc/g

RADIOACTIVITY IN WATER		
GROSS ACTIVITY		
SUSPENDED	DISSOLVED	TOT[AL]
μμc/l	μμc/l	μμ[c/l]

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE OREGON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN COLUMBIA RIVER BELOW YAKIMA RIVER

STATION LOCATION COLUMBIA RIVER AT

BONNEVILLE, OREGON 8

Date of Sample: Month	Day	Year	Algae (Number per ml.): Total	Blue-Green: Coccoid	Blue-Green: Filamentous	Green: Coccoid	Green: Filamentous	Flagellates (Pigmented): Green	Flagellates (Pigmented): Other	Diatoms: Centric	Diatoms: Pennate	Inert Diatom Shells (No. per ml.): Centric	Inert Diatom Shells: Pennate	Diatoms Dominant Species and Percentages (See Introduction for Code Identification*): First*	Percentage	Second*	Percentage	Third*	Percentage	Fourth*	Percentage	Other Percentage	Other Microplankton, Fungi and Sheathed Bacteria (No. per ml.)	Microinvertebrates: Protozoa (No. per ml.)	Rotifers (No. per liter)	Crustacea (No. per liter)	Nematodes (No. per liter)	Other Animal Forms (No. per liter)	Dominant Genera (See Introduction for Identification)
10	10	60	500		20	20		50	160	160	50	1250	490	82	30	45	10	58	10	92	10	40	20		6				-----
10	24	60	1100						110	860	110	630	360	82	30	45	10	92	10	83	10	40		10	1	1			--9--
11	14	60	500			20			20	110	310	130	90	82	20	56	20	2	20	45	10	50	90	10					-----
11	21	60	200							40	130	40	40	56	10	82	10	47	10	92	10	60	40						-----
12	12	60	100							40		40	110	92	20	45	10	56	10	61	10	60	20						-----
12	27	60	100							70	50	50	380	47	30	82	10	92	10	56	10	60				1			-----
1	9	61	100							70	70		220	55	30	92	20	61	10	74	10	40							-----
1	23	61	200							70	180	90	250	47	10	71	10	2	10	45	10	60							-----
2	13	61	100					20		20	90	40	470	61	20	55	20	92	20	74	10	40							-----
2	20	61	200							20	130	50	450	92	10	80	*	61	*	62	*	70		10					-----
3	7	61	700			20				200	490	290	360	95	20	9	10	92	10	82	10	50							3-9--
3	20	61	1100					70		330	670	200	490	9	20	80	10	82	10	95	10	60	40	10					3-9--
4	10	61	3200			20		20		1680	1520	400	1470	9	30	95	10	82	10	92	10	40		10	3	6			3-9--
4	24	61	2500			20				1330	1160	350	620	9	30	61	20	82	10	95	10	40	20		2				349--
5	8	61	7000			60		20	20	4020	2920	640	1490	80	30	47	20	61	10	92	10	30	20	10	2				3-977
5	22	61	5900	20		60		40		1330	4470	350	1570	61	30	47	20	9	10	92	10	40	20						3-977
6	12	61	1000					20		220	800	270	780	95	10	47	10	2	10	62	10	70	20		2		2		3-9--
6	26	61	6200		40	60				5550	540	970	750	47	30	61	20	95	20	9	10	30							3-9-7
7	10	61	18200			80		60	20	16520	1490	1820	1160	84	60	47	20	92	*	61	*	10			18				3-97-
7	24	61	8900	20	80	150		130		7310	1180	1410	640	47	50	84	20	26	10	45	10	20		10	91	4			34977
8	7	61	1300			80			20	520	700	270	370	47	40	84	10	58	10	56	10	20		10	228	1	2	1	3-977
8	21	61	600			20			20	360	220	220	130	47	40	58	40	92	10	46	10	10			141	3	1		----7
9	11	61	2100			190			20	1590	250	730	290	47	40	45	20	58	10	82	10	20	20		107	1			4-9-7
9	25	61	1000			60		60	20	700	150	390	150	58	20	82	20	47	20	27	10	30	40		173	2			4-9--

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE OREGON
MAJOR BASIN PACIFIC NORTHWEST
MINOR BASIN COLUMBIA RIVER BELOW YAKIMA RIVER
STATION LOCATION COLUMBIA RIVER AT
BONNEVILLE, OREGON

8

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLOROFORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGENATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	24	60	11	14	7312	82	16	66	0	3	7	1	1	5	0	2	1	0	3
11	14	60	11	21	3047	113	16	97	0	4	6	1	1	4	0	2	0	1	3
12	12	60	12	22	5333	75	12	63	0	3	5	1	0	4	0	1	1	0	2
1	9	61	1	23	4502	65	14	51	0	3	5	1	0	4	0	2	1	0	3
2	13	61	2	20	3228	132	31	101	0	9	8	1	0	6	1	4	2	0	8
3	6	61	3	18	5265	91	26	65	0	7	6	0	1	5	0	3	2	0	8
4	10	61	4	24	4529	128	43	85	-	-	-	-	-	-	-	-	-	-	-
5	8	61	5	21	5083	78	23	55	-	-	-	-	-	-	-	-	-	-	-
6	12	61	6	25	5343	84	27	57	-	-	-	-	-	-	-	-	-	-	-
6	12	61		*	14955	95	30	65	2	7	9	2	1	6	0	3	2	0	7
7	10	61	7	24	4079	105	40	65	-	-	-	-	-	-	-	-	-	-	-
8	7	61	8	21	5397	69	21	48	-	-	-	-	-	-	-	-	-	-	-
8	7	61		*	9476	78	29	49	1	9	9	2	1	6	0	4	2	0	4
9	11	61	9	25	7323	-	*	42	-	-	-	-	-	-	-	-	-	-	-

*LABORATORY ACCIDENT

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE OREGON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN COLUMBIA RIVER BELOW YAKIMA RIVER

STATION LOCATION COLUMBIA RIVER AT BONNEVILLE, OREGON 8

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	10	60	16.1	9.3	8.1	.5	4	-	-	.1	4	70	75	5	5	16	.0	112	280
10	24	60	14.5	9.9	8.3	.6	5	.7	2.2	.1	4	76	78	10	5	17	.1	105	-
11	14	60	10.1	9.9	7.9	.9	10	.4	1.8	.3	4	70	79	5	5	15	.3	119	680
11	21	60	9.4	10.7	7.7	.9	6	.9	1.8	.2	5	67	74	5	5	16	.6	119	160
12	12	60	5.0	11.3	7.9	.7	7	.5	1.3	.2	5	65	72	5	5	14	.1	136	460
12	27	60	-	11.6	7.7	.2	18	.5	1.6	.2	5	72	83	5	5	18	.1	133	11
1	9	61	5.2	11.4	7.6	-	13	1.3	3.8	.3	5	75	75	10	200	17	.1	101	180
1	25	61	5.2	11.6	7.4	2.0	21	.9	3.2	.3	5	77	81	10	45	20	.1	148	-
2	20	61	7.5	12.2	7.5	1.7	12	1.4	3.8	.4	4	60	61	10	130	16	.1	106	-
3	6	61	6.0	12.7	7.5	2.5	10	1.4	2.5	.6	3	57	65	10	25	16	.0	123	25
3	20	61	7.5	11.9	7.5	1.0	25	1.3	2.3	.2	4	61	67	10	25	15	.1	113	60
4	10	61	10.3	10.9	7.8	.7	10	1.4	3.4	.1	6	59	64	10	20	14	.1	126	-
4	24	61	9.6	10.9	7.7	.8	6	.5	2.7	.1	3	56	63	10	5	11	.1	113	-
5	8	61	11.8	10.7	7.8	1.7	11	1.4	2.9	.1	3	51	56	10	20	10	.0	105	1
5	22	61	14.0	11.0	7.9	1.2	9	1.3	2.4	.2	2	52	57	10	25	9	.0	85	1
6	12	61	14.5	11.6	7.0	1.4	8	.2	2.3	.2	2	45	51	5	25	10	.0	79	15
6	26	61	16.5	10.0	7.4	.9	3	.8	2.4	.2	2	48	55	10	15	10	.0	84	2
7	10	61	19.7	9.9	8.2	1.2	5	1.1	3.6	.2	2	53	59	5	15	10	.0	93	-
7	24	61	20.0	8.2	8.2	1.3	6	.9	2.5	.2	2	53	62	5	10	9	.0	83	*5
8	7	61	22.0	7.8	8.2	1.0	5	1.0	2.6	.2	2	55	63	5	5	9	.0	97	*1
8	21	61	21.7	7.0	8.0	1.0	11	.6	2.9	.3	3	58	68	7	25	13	.0	96	*20
9	25	61	17.0	8.5	8.2	1.2	8	1.1	1.9	.2	4	65	71	5	5	13	.0	117	*1

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Computed Data for Bonneville, Oregon
Supplied by U.S. Geological Survey

STATE	Oregon
MAJOR BASIN	Pacific Northwest
MINOR BASIN	Columbia River below Yakima River
STATION LOCATION	Columbia River at Bonneville, Oregon

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	113.000	114.000	119.000	99.500	126.000	184.000	166.000	210.000	585.000	379.000	159.000	108.000
2	102.000	109.000	111.000	92.200	155.000	190.000	156.000	230.000	592.000	357.000	165.000	116.000
3	109.000	107.000	103.000	98.300	163.000	189.000	191.000	206.000	611.000	338.000	154.000	97.900
4	102.000	109.000	99.400	96.900	154.000	182.000	201.000	218.000	642.000	319.000	147.000	97.900
5	102.000	108.000	100.000	96.300	153.000	174.000	191.000	194.000	667.000	309.000	141.000	110.000
6	98.800	104.000	95.400	112.000	153.000	176.000	212.000	182.000	674.000	295.000	139.000	113.000
7	102.000	99.200	101.000	107.000	151.000	179.000	201.000	215.000	694.000	273.000	136.000	111.000
8	94.500	99.900	94.300	116.000	153.000	161.000	189.000	218.000	714.000	271.000	131.000	101.000
9	101.000	96.500	91.400	127.000	155.000	149.000	194.000	222.000	703.000	261.000	127.000	103.000
10	99.200	101.000	84.300	119.000	223.000	142.000	200.000	226.000	703.000	250.000	119.000	103.000
11	94.000	100.000	92.700	110.000	235.000	152.000	201.000	262.000	707.000	242.000	123.000	106.000
12	96.000	98.500	94.700	90.800	230.000	153.000	169.000	274.000	699.000	230.000	129.000	92.300
13	92.700	101.000	96.400	88.200	229.000	162.000	189.000	294.000	685.000	233.000	139.000	102.000
14	96.200	99.800	93.400	92.000	212.000	171.000	188.000	306.000	655.000	229.000	130.000	102.000
15	93.100	100.000	95.000	93.400	200.000	166.000	186.000	301.000	662.000	217.000	136.000	100.000
16	94.900	111.000	94.400	101.000	186.000	168.000	189.000	308.000	648.000	211.000	142.000	94.800
17	108.000	114.000	101.000	104.000	173.000	177.000	178.000	325.000	614.000	207.000	126.000	85.200
18	104.000	119.000	109.000	101.000	173.000	181.000	180.000	333.000	599.000	197.000	119.000	91.900
19	98.200	112.000	110.000	97.000	187.000	182.000	180.000	352.000	608.000	205.000	125.000	84.900
20	94.000	108.000	98.000	101.000	188.000	170.000	188.000	355.000	613.000	206.000	114.000	82.500
21	89.800	117.000	99.600	110.000	185.000	166.000	166.000	352.000	599.000	206.000	112.000	91.400
22	94.000	113.000	108.000	113.000	186.000	177.000	161.000	367.000	581.000	210.000	103.000	89.200
23	92.700	120.000	96.700	103.000	198.000	179.000	167.000	400.000	556.000	203.000	102.000	90.300
24	91.300	131.000	95.200	108.000	224.000	182.000	160.000	419.000	528.000	197.000	107.000	84.400
25	92.900	129.000	93.600	113.000	208.000	187.000	167.000	434.000	499.000	195.000	98.800	85.500
26	95.200	120.000	94.000	114.000	199.000	187.000	184.000	470.000	481.000	194.000	117.000	85.800
27	96.400	121.000	97.400	116.000	192.000	201.000	194.000	505.000	459.000	202.000	112.000	87.400
28	108.000	117.000	94.400	118.000	190.000	203.000	188.000	530.000	440.000	199.000	116.000	85.200
29	108.000	118.000	97.300	118.000		184.000	175.000	535.000	413.000	182.000	120.000	88.600
30	109.000	123.000	103.000	115.000		174.000	173.000	534.000	393.000	171.000	125.000	86.200
31	110.000		96.400	124.000		165.000		540.000		153.000	115.000	

Computed as sum of Columbia River near The Dalles, Oregon plus twice the sum of Klickitat River near Pitt, Washington and Hood River and conduit near Hood River, Oregon.

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE OREGON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN COLUMBIA RIVER BELOW YAKIMA RIVER

STATION LOCATION COLUMBIA RIVER AT MCNARY DAM, OREGON 81

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
4	6	61	4	20	0	1	1	56	205	261									
5	15	61	6	2	0	1	1	102	182	284									
5	22	61	6	15	0	0	0	16	135	151									
5	29	61	6	15	1	0	1	9	50	59									
6	5	61	7	5	0	0	0	12	44	56									
6	12	61	7	7	0	0	0	6	24	30									
6	19	61	7	28	0	0	0	4	41	45									
6	26	61	7	27	0	0	0	25	60	85									
7	3	61	8	2	0	0	0	3	62	65									
7	10	61	8	2	0	0	0	6	65	71									
7	17	61	8	7	0	1	1	6	77	83									
7	24	61	8	14	0	0	0	5	95	100									
7	31	61	9	7	0	1	1	14	19	33									
8	7	61	9	1	0	1	1	17	204	221									
8	14	61	9	12	0	0	0	12	15	27									
8	21	61	9	25	0	1	1	3	86	89									
8	28	61	9	26	0	1	1	15	141	156									
9	4	61	10	6	0	0	0	16	46	62									
9	11	61	10	18	0	1	1	17	11	28									
9	18	61	10	19	0	0	0	21	154	175									
9	25	61	11	3	0	1	1	29	357	386									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE OREGON
MAJOR BASIN PACIFIC NORTHWEST
MINOR BASIN COLUMBIA RIVER BELOW YAKIMA RIVER
STATION LOCATION COLUMBIA RIVER AT
MCNARY DAM, OREGON 81

DATE OF SAMPLE			ALGAE (Number per ml.)								INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
			TOTAL	BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																		
MONTH	DAY	YEAR		COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
4	6	61	1200			20		20		600	510	160	220	9	30	61	20	82	20	95	10	30			27				3-9--
5	15	61	2600					20	20	510	2080	200	600	61	30	47	10	9	10	80	10	30	50		4	8			3---7
6	5	61	1000							200	760	160	740	61	20	9	20	95	20	92	10	30	20		2	1			---7-
6	19	61	500							160	360	110	810	84	20	95	20	61	10	62	10	50			3				-----
7	3	61	700					20		270	380	20	160	84	70	47	10	61	*	26	*	10							3-9--
7	17	61	5500			80		80	20	4490	790	1080	540	84	50	47	40	61	*	95	*	10			5				--976
8	7	61	2100	20		130		170	20	1350	460	390	310	84	40	47	40	58	10	92	*	10			148	39			--97-
8	21	61	500	20		20				350	80	100	20	58	50	47	30	92	20	56	*	*			179	11			--9-7
9	4	61								20	20	20	20	92	50	58	20	82	10	26	10	10			16	4			-----
9	18	61	500			80				250	210	60	290	47	20	84	10	58	10	92	10	50			14	2			-----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE OREGON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN COLUMBIA RIVER BELOW YAKIMA RIVER

STATION LOCATION COLUMBIA RIVER AT MCNARY DAM, OREGON 81

DATE OF SAMPLE											CHLOROFORM EXTRACTABLES								
BEGINNING			END			EXTRACTABLES					NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY	GALLONS FILTERED	TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
4	1	61	4	30	5255	109	49	60	1	12	13	1	1	11	0	7	5	0	11
6	5	61	6	19	5000	115	57	58	1	12	15	2	1	12	0	7	6	1	15
7	3	61	7	17	5000	88	31	57	1	7	13	3	1	9	0	3	1	1	5
8	7	61	8	21	4930	106	34	72	0	8	13	2	1	10	0	5	2	1	5
9	4	61	9	18	4873	92	26	66	1	7	9	1	1	7	0	3	1	1	4

665709 O - 62 - 9

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station below McNary Dam, Oregon
Operated by U.S. Geological Survey

STATE Oregon

MAJOR BASIN Pacific Northwest

MINOR BASIN Columbia River below Yakima River

STATION LOCATION Columbia River at McNary Dam, Oregon

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	96.200	102.000	108.000	87.200	118.000	163.000	151.000	209.000	576.000	353.000	158.000	103.000
2	97.100	98.800	93.500	87.600	134.000	167.000	167.000	198.000	584.000	337.000	151.000	97.900
3	98.600	97.800	89.400	86.600	134.000	164.000	177.000	196.000	610.000	318.000	141.000	89.000
4	94.400	102.000	86.900	87.300	132.000	156.000	170.000	196.000	642.000	302.000	138.000	94.000
5	91.100	98.600	85.800	89.300	133.000	155.000	184.000	159.000	654.000	291.000	130.000	106.000
6	92.000	92.700	88.200	101.000	127.000	156.000	184.000	187.000	664.000	270.000	129.000	105.000
7	93.800	88.700	88.000	99.400	132.000	152.000	178.000	204.000	696.000	259.000	124.000	97.900
8	94.400	87.500	84.400	108.000	129.000	140.000	172.000	204.000	692.000	255.000	127.000	92.200
9	89.900	95.800	81.900	109.000	129.000	128.000	185.000	200.000	686.000	246.000	111.000	99.500
10	85.200	90.300	80.600	99.500	142.000	127.000	181.000	235.000	690.000	235.000	115.000	93.200
11	89.300	89.000	86.200	87.600	164.000	132.000	168.000	251.000	689.000	224.000	115.000	91.300
12	85.900	91.700	81.900	80.900	179.000	138.000	163.000	274.000	676.000	225.000	128.000	91.100
13	86.100	91.500	82.300	84.700	172.000	141.000	177.000	285.000	659.000	222.000	126.000	95.400
14	91.500	91.000	86.200	85.700	165.000	133.000	171.000	287.000	659.000	213.000	128.000	93.400
15	87.200	94.700	86.800	88.700	156.000	133.000	174.000	281.000	639.000	205.000	135.000	100.000
16	93.400	97.600	89.900	91.300	147.000	148.000	169.000	303.000	617.000	200.000	121.000	80.900
17	98.600	103.000	102.000	85.400	146.000	147.000	164.000	314.000	577.000	190.000	114.000	77.000
18	93.600	101.000	98.200	85.500	160.000	161.000	160.000	325.000	590.000	193.000	114.000	78.400
19	86.800	94.000	86.600	90.100	160.000	151.000	175.000	335.000	603.000	196.000	112.000	79.900
20	85.800	101.000	85.900	93.100	159.000	139.000	155.000	336.000	589.000	197.000	103.000	80.500
21	87.300	102.000	101.000	100.000	153.000	146.000	150.000	341.000	578.000	202.000	95.000	80.800
22	87.100	106.000	92.400	95.800	156.000	160.000	148.000	365.000	550.000	200.000	89.900	84.400
23	82.200	103.000	85.500	92.700	192.000	150.000	152.000	396.000	529.000	185.000	95.300	80.800
24	83.400	100.000	85.200	101.000	186.000	155.000	149.000	408.000	496.000	189.000	104.000	84.100
25	82.600	105.000	84.700	103.000	181.000	155.000	159.000	441.000	472.000	182.000	112.000	76.000
26	89.400	105.000	84.700	106.000	167.000	167.000	179.000	474.000	457.000	187.000	107.000	78.900
27	95.900	105.000	82.300	107.000	170.000	183.000	174.000	503.000	437.000	186.000	105.000	79.600
28	100.000	104.000	85.000	107.000	165.000	173.000	171.000	524.000	408.000	178.000	112.000	79.800
29	100.000	115.000	90.800	105.000		158.000	156.000	514.000	394.000	168.000	119.000	83.100
30	101.000	105.000	88.600	104.000		148.000	168.000	522.000	375.000	158.000	114.000	80.500
31	104.000		89.000	108.000		149.000		535.000		152.000	97.900	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE WASHINGTON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN MIDDLE AND LOWER SNAKE RIVER

STATION LOCATION COLUMBIA RIVER AT

PASCO, WASHINGTON 9

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	3	60	10	19	-	-	-	59	761	820							
10	17	60	11	1	0	2	2	114	676	790							
10	24	60	11	9	0	2	2	58	601	659							
10	31	60	11	18	-	-	-	48	671	719							
11	7	60	11	25	-	-	-	76	1027	1103							
11	28	60	12	12	0	1	1	68	1123	1191							
12	5	60	12	30	-	-	-	63	694	757							
12	12	60	1	3	-	-	-	864	989	1073							
12	19	60	1	25	-	-	-	35	489	524							
12	27	60	1	20	0	2	2	113	731	844							
1	3	61	1	24	-	-	-	188	962	1150							
1	9	61	1	27	-	-	-	169	851	1020							
1	16	61	2	2	-	-	-	168	651	819							
1	23	61	2	15	0	1	1	74	621	695							
1	30	61	2	16	-	-	-	69	706	775							
2	6	61	2	21	-	-	-	105	794	899							
2	14	61	3	6	-	-	-	151	760	911							
2	20	61	3	9	-	-	-	52	467	519							
2	27	61	3	17	0	0	0	87	398	485							
3	6	61	3	28	-	-	-	108	512	620							
3	13	61	3	31	-	-	-	89	505	594							
3	20	61	4	5	-	-	-	128	612	740							
3	27	61	4	17	0	0	0	89	474	563							
4	3	61	4	20	-	-	-	183	630	813							
4	10	61	5	2	-	-	-	58	351	409							
4	17	61	5	22	-	-	-	48	280	328							
5	1	61	5	17	-	-	-	96	398	494							
5	8	61	5	26	-	-	-	107	368	475							
5	15	61	6	2	-	-	-	67	365	432							
5	22	61	6	15	-	-	-	32	117	149							
5	29	61	7	10	-	-	-	25	40	65							
6	5	61	7	6	-	-	-	9	46	55							
6	12	61	7	7	-	-	-	7	39	46							
6	19	61	7	14	-	-	-	6	46	52							
6	26	61	8	1	0	0	0	4	35	39							
7	5	61	9	6	-	-	-	16	50	66							
7	10	61	8	3	-	-	-	14	149	163							
7	17	61	8	14	-	-	-	6	109	115							
7	24	61	8	23	0	0	0	11	148	159							
7	31	61	9	1	1	1	2	10	115	125							

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE WASHINGTON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN MIDDLE AND LOWER SNAKE RIVER

STATION LOCATION COLUMBIA RIVER AT

PASCO, WASHINGTON 9

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
8	7	61	9	8	-	-	-	21	222	243							
8	15	61	9	21	-	-	-	14	208	222							
8	21	61	9	25	-	-	-	5	177	182							
8	28	61	9	28	0	0	0	13	187	200							
9	11	61	10	30	-	-	-	13	173	186							
9	18	61	10	11	-	-	-	61	445	506							
9	25	61	10	11	0	0	0	64	553	617							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE: WASHINGTON

MAJOR BASIN: PACIFIC NORTHWEST

MINOR BASIN: MIDDLE AND LOWER SNAKE RIVER

STATION LOCATION: COLUMBIA RIVER AT PASCO, WASHINGTON

9

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	18	60	200							90	90	70	350	2	20	82	10	62	10	56	10	60	40		1				-----
11	14	60	200	20					20	70	110	70	130	62	20	47	10	2	10	82	10	50	20		1		1	1	-----
12	5	60	400							70	360	90	110	2	10	82	10	70	10	62	10	70							-----
12	19	60	100							50	20	20	110	62	20	2	10	47	10	71	10	60	40		1				-----
1	1	61	100			20					50	50	430	47	20	62	10	61	10	70	10	60	40						-----
2	6	61	300							20	220	20	360	47	20	61	10	95	10	62	10	50			2	2			-----
2	20	61									50		200	9	20	95	20	61	10	47	10	50			3				-----
3	6	61	900					20		310	580	70	220	95	40	61	20	62	10	9	10	30							3----
3	20	61	1100							510	560	50	340	95	20	2	10	92	10	71	10	50		10	7			1	3-9--
4	3	61	2300		20		20			820	1400	130	330	95	30	9	20	61	10	92	10	40	90						3-983
5	1	61	2400			20				810	1550	210	440	47	30	61	30	9	20	95	10	20	40		1				3-977
5	15	61	6300			40	20	40	40	1260	4840	210	930	61	30	9	20	47	20	95	10	20	40		8	3			3-9-7
6	5	61	800							220	560	130	860	95	40	61	30	47	20	9	*	10			6	1	1		3---7
6	19	61	500			20				160	340	110	220	84	40	47	10	95	10	61	10	30			4	3	2		3---7
7	5	61	6700			80		60		5780	750	680	330	84	40	47	20	95	10	9	10	20			2				3-97-
7	19	61	400							50	340	110	310	84	50	47	20	9	10	2	*	10			31				3----
8	7	61	500					20		230	270	40	170	84	70	47	10	31	10	62	*	10			4				--9--
8	21	61	800	80	60	150		20		190	350	40	370	47	30	92	30	58	20	62	10	20	20		6				7----
9	11	61	500					20		120	330	20	250	47	50	62	20	2	*	92	*	20	150		5				-----
9	18	61	500		20	60		20		80	330	20	170	47	40	62	10	2	10	45	10	30	40		10	3	1		-----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE WASHINGTON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN MIDDLE AND LOWER SNAKE RIVER

STATION LOCATION COLUMBIA RIVER AT PASCO, WASHINGTON 9

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS	
10	18	60	10	24	3940	97	14	83	0	4	5	1	0	4	0	1	1	0	3	
11	10	60	11	17	3940	76	13	63	1	3	5	1	0	4	0	1	1	0	2	
12	5	60	12	12	4910	83	15	68	0	5	5	1	1	3	0	1	1	0	3	
12	27	60	1	4	4510	88	18	70	1	4	7	1	1	5	0	2	1	0	3	
1	23	61	1	31	5302	64	26	38	1	7	6	1	0	5	0	2	2	0	8	
2	15	61	2	21	3770	94	15	79	1	5	4	1	0	3	0	1	0	0	4	
3	7	61	3	13	3870	95	21	74	0	6	7	0	0	6	1	2	1	1	4	
4	4	61	4	12	3890	103	31	72	2	10	8	2	1	5	0	3	2	0	6	
5	2	61	5	11	3450	119	47	72	2	14	11	3	1	6	1	4	4	0	12	
5	29	61	6	8	3190	123	36	87	1	10	11	2	1	6	2	3	3	1	7	
6	27	61	7	7	5050	99	34	65	2	9	8	2	1	5	0	5	3	1	6	
7	21	61	7	31	5460	83	19	64	0	5	7	1	1	5	0	1	1	0	5	
8	16	61	8	25	5060	79	20	59	0	5	8	2	1	5	0	2	1	1	3	
9	18	61	9	25	5260	66	15	51	1	4	5	1	0	4	0	2	1	0	2	

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE WASHINGTON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN MIDDLE AND LOWER SNAKE RIVER

STATION LOCATION COLUMBIA RIVER AT

PASCO, WASHINGTON 9

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	18.0	9.7	8.5	1.1	-	1.2	1.5	-	-	69	66	7	2	-	-	-	-
10	10	60	16.0	9.5	8.5	.4	-	1.2	1.5	-	-	72	68	7	2	-	-	-	-
10	17	60	16.0	9.4	8.4	.6	-	1.2	1.5	-	-	72	66	7	2	-	-	-	-
10	24	60	16.0	9.3	8.5	.6	-	1.2	1.5	-	-	69	68	6	2	-	-	-	-
10	31	60	15.0	10.0	8.3	.9	-	.7	1.0	-	-	73	66	8	16	-	-	-	-
11	7	60	13.0	10.6	8.3	1.3	-	.7	1.0	-	-	68	72	7	1	-	-	-	-
11	14	60	13.0	9.8	8.2	.9	-	.7	1.0	-	-	68	70	6	1	-	-	-	-
11	21	60	12.0	10.0	8.3	1.5	-	.7	1.0	-	-	72	70	7	1	-	-	-	-
11	28	60	10.0	10.6	8.1	1.2	-	.7	1.0	-	-	74	68	7	2	-	-	-	-
12	5	60	10.0	11.0	8.1	1.5	-	.7	1.0	-	-	69	74	6	2	-	-	-	-
12	12	60	8.0	11.7	8.2	2.7	-	.5	.7	-	-	74	72	8	2	-	-	-	-
12	19	60	8.0	11.2	8.3	2.0	-	.5	.7	-	-	70	70	7	2	-	-	-	-
12	26	60	8.0	11.0	8.2	1.6	-	.5	.7	-	-	72	76	6	16	-	-	-	-
1	2	61	7.0	12.0	8.2	2.1	-	.5	.7	-	-	74	74	9	3	-	-	-	-
1	9	61	7.0	11.1	8.1	2.0	-	.5	.7	-	-	73	76	7	2	-	-	-	-
1	16	61	7.0	11.7	8.3	2.5	-	.7	1.0	-	-	77	74	8	2	-	-	-	-
1	23	61	6.0	11.3	7.9	2.2	-	.7	1.0	-	-	77	70	8	5	-	-	-	-
1	30	61	6.0	11.9	7.9	2.1	-	.7	1.0	-	-	75	74	7	2	-	-	-	-
2	6	61	6.0	12.2	7.9	1.9	-	.7	1.0	-	-	74	76	12	8	-	-	-	-
2	13	61	7.0	12.0	8.1	2.2	-	.7	1.0	-	-	74	76	15	30	-	-	-	-
2	20	61	6.0	12.1	7.8	2.5	-	.7	1.0	-	-	77	76	13	6	-	-	-	-
2	27	61	7.0	12.4	8.1	2.4	-	.7	1.0	-	-	75	78	10	11	-	-	-	-
3	6	61	5.0	12.1	8.1	2.7	-	.7	1.0	-	-	77	74	10	6	-	-	-	-
3	13	61	6.0	12.0	8.0	1.3	-	.6	1.2	-	-	74	76	13	9	-	-	-	-
3	20	61	6.0	12.3	7.8	2.8	-	.6	1.2	-	-	67	72	16	22	-	-	-	-
3	27	61	7.0	12.1	8.0	2.4	-	.7	1.2	-	-	69	72	16	12	-	-	-	-
4	3	61	9.0	11.5	8.0	1.6	-	.6	1.2	-	-	66	70	13	9	-	-	-	-
4	10	61	8.5	12.7	8.0	2.6	-	.7	1.2	-	-	67	72	9	6	-	-	-	-
4	17	61	9.0	11.9	8.2	2.2	-	.7	1.2	-	-	72	72	10	6	-	-	-	-
4	24	61	9.0	12.3	8.1	2.7	-	.7	1.2	-	-	75	76	8	6	-	-	-	-
5	1	61	11.0	11.0	8.1	.5	-	.7	1.1	-	-	72	74	10	7	-	-	-	-
5	8	61	12.0	11.4	8.1	2.1	-	.7	1.2	-	-	71	68	11	5	-	-	-	-
5	15	61	12.0	11.6	8.0	1.9	-	.9	1.3	-	-	76	70	11	9	-	-	-	-
5	22	61	-	12.7	8.1	2.9	-	.2	1.6	-	-	70	68	12	13	-	-	-	-
5	29	61	12.0	12.4	7.9	3.3	-	.9	1.8	-	-	66	62	15	9	-	-	-	-
6	5	61	14.0	11.2	7.9	2.0	-	1.6	-	-	-	62	58	13	10	-	-	-	-
6	12	61	13.0	11.6	8.0	2.4	-	1.2	1.6	-	-	68	60	21	15	-	-	-	-
6	19	61	15.0	11.2	8.1	-	-	.7	1.3	-	-	60	62	24	14	-	-	-	-
6	26	61	16.0	12.1	8.0	2.8	-	1.0	1.6	-	-	66	66	20	10	-	-	-	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE WASHINGTON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN MIDDLE AND LOWER SNAKE RIVER

STATION LOCATION COLUMBIA RIVER AT PASCO, WASHINGTON 9

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	3	61	16.0	11.9	8.0	2.8	-	1.1	1.6	-	-	71	64	10	8	-	-	-	-
7	10	61	18.0	9.6	8.2	1.1	-	1.0	1.8	-	-	70	60	15	6	-	-	-	-
7	17	61	18.0	9.2	8.2	1.0	-	1.0	1.8	-	-	67	64	11	6	-	-	-	-
7	24	61	19.5	9.3	8.3	.3	-	1.1	2.0	-	-	74	64	11	6	-	-	-	-
7	31	61	20.0	9.3	8.1	.5	-	1.0	1.8	-	-	75	68	10	5	-	-	-	-
8	1	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	190
8	7	61	20.0	9.8	8.1	1.0	-	1.1	1.7	-	-	66	68	9	4	-	-	-	-
8	8	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*1
8	14	61	20.5	8.7	8.1	.1	-	1.2	1.5	-	-	75	70	7	5	-	-	-	-
8	15	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
8	21	61	22.0	9.1	-	1.2	-	1.0	1.7	-	-	76	69	11	4	-	-	-	-
8	22	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
8	28	61	21.0	9.5	8.2	.9	-	1.1	1.6	-	-	73	73	8	3	-	-	-	
8	29	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
9	4	61	20.0	8.9	8.2	.8	-	.7	1.5	-	-	73	68	8	3	-	-	-	-
9	11	61	19.0	8.9	8.2	1.1	-	.7	1.3	-	-	72	74	9	3	-	-	-	-
9	12	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53
9	18	61	20.0	8.7	-	.8	-	.7	1.5	-	-	70	70	6	3	-	-	-	
9	19	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
9	25	61	18.0	9.1	8.1	.1	-	.8	1.6	-	-	68	70	10	3	-	-	-	

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Computed Data for Pasco, Washington
Supplied by U.S. Geological Survey

STATE Washington

MAJOR BASIN Pacific Northwest

MINOR BASIN Middle and Lower Snake River

STATION LOCATION Columbia River at Pasco, Washington

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	80.200	72.300	71.800	62.800	85.200	113.000	106.000	117.000	425.000	311.000	133.000	82.800
2	75.100	72.300	63.700	64.800	89.400	102.000	117.000	122.000	445.000	298.000	124.000	80.700
3	73.900	70.300	59.700	65.800	95.800	102.000	117.000	122.000	460.000	279.000	116.000	85.800
4	76.800	67.400	54.700	70.800	95.300	106.000	107.000	122.000	480.000	273.000	117.000	82.800
5	73.700	67.400	57.700	70.800	94.600	114.000	109.000	129.000	492.000	255.000	115.000	79.800
6	70.700	66.300	59.600	67.800	95.400	112.000	111.000	130.000	514.000	244.000	116.000	80.700
7	70.700	65.300	58.500	60.500	88.700	99.900	105.000	138.000	526.000	232.000	103.000	74.700
8	67.800	65.200	58.400	58.000	82.600	93.700	115.000	145.000	529.000	225.000	101.000	78.600
9	66.900	66.200	62.300	54.800	84.700	91.500	125.000	164.000	540.000	216.000	101.000	79.500
10	65.900	68.200	63.300	54.900	84.300	95.400	119.000	189.000	546.000	208.000	97.300	74.500
11	62.900	69.100	61.200	55.900	86.100	95.200	114.000	201.000	543.000	203.000	96.300	80.400
12	64.000	71.100	62.100	61.800	87.000	107.000	122.000	214.000	531.000	202.000	122.000	73.400
13	68.900	68.400	62.100	64.700	87.900	101.000	118.000	222.000	530.000	199.000	127.000	75.400
14	71.800	68.600	63.200	60.600	91.900	88.500	120.000	217.000	518.000	187.000	126.000	75.300
15	73.200	70.500	65.300	57.600	96.800	86.500	114.000	226.000	509.000	186.000	104.000	71.400
16	73.400	69.400	68.400	55.000	98.400	89.100	24.000	244.000	482.000	184.000	101.000	70.500
17	68.200	68.400	63.200	60.600	104.000	92.700	122.000	249.000	491.000	185.000	100.000	68.500
18	60.200	69.500	59.200	62.800	106.000	94.400	116.000	259.000	499.000	182.000	90.700	59.600
19	60.000	71.900	56.300	68.600	106.000	93.800	101.000	262.000	498.000	181.000	86.700	64.600
20	60.700	72.300	59.300	74.200	102.000	96.700	92.800	253.000	490.000	181.000	81.800	67.600
21	62.000	71.100	61.300	74.900	99.500	100.000	95.400	261.000	477.000	177.000	76.700	66.600
22	60.900	74.300	59.300	75.700	102.000	100.000	100.000	283.000	475.000	174.000	83.500	59.600
23	56.900	74.300	56.200	74.500	107.000	99.500	94.800	298.000	438.000	174.000	89.400	62.700
24	58.700	75.000	56.200	78.300	110.000	100.000	96.400	316.000	424.000	172.000	93.300	62.700
25	68.500	74.200	56.200	78.100	113.000	104.000	129.000	342.000	410.000	174.000	94.300	57.700
26	74.500	75.700	54.200	78.100	114.000	119.000	126.000	369.000	402.000	176.000	97.400	56.800
27	76.400	76.600	57.300	75.000	118.000	116.000	123.000	370.000	375.000	167.000	95.400	54.800
28	84.400	78.200	63.000	76.700	118.000	97.900	106.000	381.000	359.000	157.000	95.900	56.800
29	83.300	79.000	64.000	76.500		95.100	109.000	396.000	345.000	145.000	93.000	64.700
30	83.300	76.900	64.900	76.500		95.900	111.000	404.000	326.000	139.000	89.700	58.800
31	76.400		64.900	78.700		97.000		417.000		135.000	86.700	

Computed as sum of Columbia River at Trinidad, Washington plus Yakima River at Kiona, Washington.

RADIOACTIVITY DETERMINATIONS

STATE WASHINGTON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN COLUMBIA RIVER ABOVE YAKIMA RIVER

STATION LOCATION COLUMBIA RIVER AT WENATCHEE, WASHINGTON 10

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	24	60*	11	16	0	2	2	0	0	0								
11	28	60*	12	8	0	1	1	0	0	0								
12	27	60*	1	13	0	2	2	0	0	0								
2	1	61*	2	16	0	0	0	0	0	0								
3	1	61*	3	17	1	0	1	1	0	1								
3	29	61*	4	11	0	0	0	0	0	0								
4	26	61*	5	11	0	1	1	0	5	5								
5	31	61*	6	12	0	1	1	0	5	5								
6	28	61*	7	21	0	0	0	0	0	0								
8	2	61*	8	29	0	1	1	0	4	4								
8	30	61*	9	18	0	0	0	0	3	3								
9	6	61	10	3	-	-	-	4	0	4								
9	13	61	10	30	-	-	-	0	6	6								
9	20	61	10	3	-	-	-	0	3	3								
9	27	61	10	11	0	0	0	0	0	0								

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE WASHINGTON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN COLUMBIA RIVER ABOVE YAKIMA RIVER

STATION LOCATION COLUMBIA RIVER AT WENATCHEE, WASHINGTON 10

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	10	60	300			50				70	180	90	270	58	30	2	10	89	10	47	10	40	70						-----
11	14	60	200			20				50	130	70	130	45	20	62	20	92	10	45	10	50	20						-----
12	5	60	100							70		20	20	62	10	2	10	47	10	92	10	60							-----
1	3	61	100							50			40	62	10	70	10	2	10	3	10	70							-----
1	25	61	100							50	50		70	61	10	95	10	62	10	9	10	60							-----
2	8	61	100								110		90	92	60	36	10	71	10	47	*	20					1		-----
3	1	61	700		20					20	670	20	160	95	30	9	20	2	10	61	10	40	90						3--8-
3	8	61	400							20	310		110	95	60	61	10	9	10	2	10	20	20						3----
3	22	61	300							50	220	50	110	92	40	95	10	9	10	2	10	30			1				-----
4	5	61	1400				40		20	820	510	180	580	9	30	95	20	82	10	2	10	40	20		3				3-9--
5	3	61	3800			20		60		560	3130	270	810	61	40	95	20	92	10	47	10	30	100		4				3--87
5	17	61	5200			40		20	20	600	4550	230	750	61	40	9	20	47	10	95	10	20			5		3		3--87
6	7	61	2200			40		20		700	1410	150	460	61	20	95	20	47	10	2	10	50			6		1		349-7
6	21	61	3100					60		2190	810	410	290	61	30	95	20	84	10	47	10	30			1	1			3497-
6	28	61	600							250	290	50	160	84	70	95	10	61	10	30	*	10			6	1		1	--9--
7	19	61	4000				20			3170	810	210	330	84	80	47	10	9	10	95	*	10			32	1			3-9-6
8	2	61	1000				20	20		730	250	40	210	82	40	45	10	47	10	62	10	30			7				--9--
8	23	61	600			20		40		170	390	80	330	47	40	62	10	84	10	92	10	40		10	5		2	1	----7
9	6	61	300			40		40		20	150	80	80	47	40	62	20	45	10	92	10	30			2				-----
9	20	61	100			40				40	60		100	47	20	62	20	2	20	93	10	40	80		6				-----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE WASHINGTON
MAJOR BASIN PACIFIC NORTHWEST
MINOR BASIN COLUMBIA RIVER ABOVE YAKIMA RIVER
STATION LOCATION COLUMBIA RIVER AT
WENATCHEE, WASHINGTON 10

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	10	60	10	17	4245	82	25	57	1	6	12	6	1	5	0	2	1	1	2
11	7	60	11	14	4100	60	17	43	0	4	8	3	1	4	0	1	1	0	3
12	12	60	12	19	2200	124	25	99	1	4	16	8	2	6	0	2	0	0	2
1	16	61	1	25	6631	50	15	35	0	3	8	3	1	4	0	2	0	0	2
2	15	61	2	22	5287	68	21	47	0	6	9	3	1	5	0	2	1	0	3
3	22	61	3	29	5158	77	16	61	0	4	7	2	1	4	0	2	1	0	2
5	3	61	5	10	3926	95	35	60	2	10	9	3	1	5	0	4	3	1	6
6	7	61	6	14	*		-	-	-	-	-	-	-	-	-	-	-	-	-
7	12	61	7	19	4063	95	37	58	-	-	-	-	-	-	-	-	-	-	-
8	16	61	8	23	4355	88	36	52	-	-	-	-	-	-	-	-	-	-	-
8	16	61		*	8418	91	36	55	1	8	17	9	2	6	0	3	1	0	6

*NOT GIVEN

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE WASHINGTON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN COLUMBIA RIVER ABOVE YAKIMA RIVER

STATION LOCATION COLUMBIA RIVER AT

WENATCHEE, WASHINGTON 10

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	10	60	15.5	-	8.0	-	-	-	-	-	4	52	64	5	5	23	.0	70	-
10	17	60	15.9	-	8.1	-	-	-	-	-	4	54	65	5	5	13	.0	78	-
10	24	60	15.8	-	8.0	-	-	-	-	-	5	53	64	5	5	12	.0	93	-
10	31	60	14.3	-	8.0	-	-	-	-	-	3	54	65	5	5	12	.0	69	-
11	7	60	13.2	-	8.1	-	-	-	-	-	3	54	65	5	5	13	.0	79	-
11	14	60	13.2	-	8.0	-	-	-	-	-	3	53	64	5	5	8	.0	92	-
11	21	60	12.8	-	7.9	-	-	-	-	-	5	55	65	5	5	13	.0	82	-
11	28	60	10.5	-	8.0	-	-	-	-	-	2	56	66	5	5	13	.0	80	-
12	5	60	9.5	-	8.0	-	-	-	-	-	4	57	68	0	0	14	.1	80	-
12	12	60	8.6	-	7.9	-	-	-	-	-	3	57	67	0	0	14	.0	90	-
12	15	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
12	19	60	7.5	-	8.0	-	-	-	-	-	2	56	66	0	0	16	.0	87	-
12	26	60	7.1	-	8.0	-	-	-	-	-	5	58	67	0	0	15	.0	84	-
1	3	61	5.9	-	8.0	-	-	-	-	-	3	58	69	0	0	15	.0	92	-
1	9	61	6.4	-	8.0	-	-	-	-	-	3	58	70	0	0	17	.0	89	-
1	16	61	6.6	-	8.0	-	-	-	-	-	3	58	70	0	0	15	.1	82	-
1	25	61	5.5	-	8.0	-	-	-	-	-	3	57	68	0	0	15	.0	88	-
2	1	61	5.4	-	8.0	-	-	-	-	-	2	60	71	0	0	16	.0	93	-
2	8	61	5.9	-	8.0	-	-	-	-	-	-	61	68	-	-	-	-	-	*5
2	15	61	4.8	-	8.0	-	-	-	-	-	3	62	72	0	0	19	.1	109	-
2	22	61	4.5	-	8.0	-	-	-	-	-	-	63	74	-	-	-	-	-	-
3	1	61	4.1	-	8.0	-	-	-	-	-	-	63	78	-	-	-	-	112	-
3	8	61	-	-	-	-	-	-	-	-	3	-	84	0	0	17	.1	-	-
3	9	61	4.1	-	8.0	-	-	-	-	-	-	62	74	-	-	-	-	102	-
3	15	61	4.8	-	7.9	-	-	-	-	-	-	58	68	0	0	17	-	-	-
3	22	61	4.9	-	7.9	-	-	-	-	-	4	56	70	0	0	17	.1	121	-
3	29	61	6.1	-	7.9	-	-	-	-	-	25	54	72	0	0	17	.0	-	-
4	5	61	6.2	-	8.0	-	-	-	-	-	4	55	64	5	-	18	-	-	-
4	12	61	6.6	-	7.9	-	-	-	-	-	5	56	68	0	0	21	.1	99	26
4	26	61	8.6	-	8.0	-	-	-	-	-	5	58	71	5	0	22	.2	102	40
5	3	61	9.5	-	8.0	-	-	-	-	-	4	55	67	0	-	12	.1	81	60
5	10	61	9.5	-	7.9	-	-	-	-	-	-	57	69	-	-	-	-	-	110
5	17	61	10.6	-	8.0	-	-	-	-	-	-	56	68	-	-	-	-	-	120
5	24	61	11.4	-	7.8	-	-	-	-	-	-	51	61	-	-	-	-	-	130
5	29	61	-	-	7.6	-	-	-	-	-	5	54	112	5	0	30	.0	-	-
5	31	61	11.7	-	7.9	-	-	-	-	-	-	52	-	0	-	-	-	-	33
6	7	61	12.4	-	7.9	-	-	-	-	-	4	46	55	0	0	11	.0	-	100
6	14	61	14.1	-	8.0	-	-	-	-	-	3	50	59	5	0	10	.0	-	-
6	21	61	14.2	-	8.0	-	-	-	-	-	4	47	60	0	0	10	.0	-	700
6	28	61	15.1	-	7.9	-	-	-	-	-	6	48	58	5	0	10	.0	-	76

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE WASHINGTON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN COLUMBIA RIVER ABOVE YAKIMA RIVER

STATION LOCATION COLUMBIA RIVER AT

WENATCHEE, WASHINGTON 10

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	5	61	16.0	-	8.0	-	-	-	-	-	5	51	61	5	-	9	.0	74	100
7	12	61	17.1	-	8.0	-	-	-	-	-	4	51	62	5	-	10	.1	81	48
7	17	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53
7	19	61	17.7	-	8.0	-	-	-	-	-	4	52	64	5	0	10	.0	87	-
7	26	61	18.6	-	8.0	-	-	-	-	-	6	52	61	5	-	10	.1	78	24
8	2	61	18.0	-	8.0	-	-	-	-	-	-	52	63	-	-	-	-	83	17
8	9	61	18.5	-	8.0	-	-	-	-	-	5	52	68	5	0	9	.0	69	120
8	16	61	18.9	-	7.9	-	-	-	-	-	4	52	62	5	0	7	.1	79	7300
8	23	61	19.5	-	7.8	-	-	-	-	-	-	48	62	-	-	-	-	66	110
8	30	61	19.0	-	7.9	-	-	-	-	-	4	52	62	5	0	10	.0	75	470
9	6	61	18.0	-	8.0	-	-	-	-	-	-	55	65	5	-	-	.1	-	120
9	13	61	18.0	-	8.2	-	-	-	-	-	-	56	68	5	0	17	.0	-	200
9	20	61	18.0	-	8.0	-	-	-	-	-	4	55	62	5	0	18	-	-	150
9	27	61	18.0	-	8.0	-	-	-	-	-	2	54	64	5	0	11	.3	78	110

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Trinidad, Washington
Operated by U.S. Geological Survey

STATE	Washington
MAJOR BASIN	Pacific Northwest
MINOR BASIN	Columbia River above Yakima River
STATION LOCATION	Columbia River at Wenatchee, Washington

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	78.000	70.000	69.000	61.000	82.000	106.000	99.000	108.000	415.000	309.000	132.000	81.000
2	73.000	70.000	61.000	63.000	86.000	96.000	110.000	112.000	436.000	296.000	122.000	79.000
3	72.000	68.000	57.000	64.000	88.000	95.000	109.000	112.000	450.000	278.000	115.000	84.000
4	75.000	65.000	52.000	69.000	90.000	99.000	98.000	112.000	469.000	272.000	116.000	81.000
5	72.000	65.000	55.000	69.000	90.000	108.000	99.000	119.000	481.000	254.000	114.000	78.000
6	69.000	64.000	57.000	66.000	91.000	106.000	101.000	121.000	502.000	242.000	115.000	79.000
7	69.000	63.000	56.000	58.000	84.000	94.000	97.000	130.000	515.000	230.000	102.000	73.000
8	66.000	63.000	56.000	55.000	77.000	88.000	108.000	137.000	518.000	223.000	100.000	77.000
9	65.000	64.000	60.000	52.000	79.000	86.000	119.000	157.000	530.000	215.000	100.000	78.000
10	64.000	66.000	61.000	52.000	78.000	85.000	113.000	182.000	537.000	207.000	96.000	73.000
11	61.000	67.000	59.000	53.000	76.000	90.000	108.000	194.000	535.000	202.000	95.000	79.000
12	62.000	69.000	60.000	59.000	77.000	102.000	117.000	206.000	523.000	201.000	121.000	72.000
13	67.000	66.000	60.000	62.000	79.000	96.000	113.000	215.000	523.000	198.000	126.000	74.000
14	70.000	66.000	61.000	58.000	84.000	83.000	115.000	209.000	513.000	186.000	125.000	74.000
15	71.000	68.000	63.000	55.000	89.000	80.000	109.000	219.000	505.000	185.000	103.000	70.000
16	71.000	67.000	66.000	52.000	91.000	81.000	120.000	237.000	478.000	183.000	99.400	69.000
17	66.000	66.000	61.000	57.000	96.000	84.000	118.000	242.000	486.000	184.000	98.200	67.000
18	58.000	67.000	57.000	58.000	99.000	86.000	112.000	252.000	493.000	181.000	89.000	58.000
19	58.000	69.000	54.000	64.000	99.000	86.000	96.000	254.000	491.000	180.000	85.000	63.000
20	58.000	69.000	57.000	70.000	96.000	89.000	88.000	245.000	482.000	180.000	80.000	66.000
21	59.000	68.000	59.000	71.000	93.000	92.000	91.000	251.000	469.000	176.000	75.000	65.000
22	58.000	71.000	57.000	72.000	95.000	92.000	96.000	272.000	469.000	173.000	82.000	58.000
23	54.000	71.000	54.000	71.000	97.000	92.000	90.000	286.000	433.000	171.000	88.000	61.000
24	56.000	72.000	54.000	75.000	100.000	93.000	91.000	304.000	420.000	163.000	92.000	61.000
25	66.000	71.000	54.000	75.000	104.000	97.000	124.000	331.000	406.000	173.000	93.000	56.000
26	72.000	71.000	52.000	75.000	106.000	111.000	121.000	359.000	398.000	175.000	96.000	55.000
27	74.000	73.000	55.000	72.000	110.000	107.000	118.000	360.000	372.000	166.000	94.000	53.000
28	82.000	75.000	61.000	74.000	111.000	90.000	101.000	371.000	356.000	156.000	94.000	55.000
29	81.000	76.000	62.000	74.000		88.000	103.000	385.000	342.000	144.000	91.000	63.000
30	81.000	74.000	63.000	74.000		89.000	104.000	394.000	325.000	138.000	88.000	57.000
31	74.000		63.000	76.000		90.000		407.000		134.000	85.000	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE MASSACHUSETTS

MAJOR BASIN NORTHEAST

MINOR BASIN CONNECTICUT RIVER

STATION LOCATION CONNECTICUT RIVER BELOW NORTHFIELD, MASSACHUSETTS 11

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	µµc/l	µµc/l	µµc/l	µµc/l	µµc/l	µµc/l		MO.	DAY	µµc/g	µµc/g	µµc/l	µµc/l	µµc/l
10	24	60*	11	15	0	1	1	0	0	0								
11	14	60*	12	22	0	0	0	0	1	1								
5	29	61*	6	13	0	0	0	0	0	0								
6	26	61*	7	14	0	0	0	0	0	0								
7	31	61*	8	24	0	0	0	0	6	6								
8	14	61*	9	22	1	0	1	0	4	4								
9	5	61	10	3	-	-	-	2	13	15								
9	11	61	10	30	-	-	-	1	8	9								
9	18	61	10	7	-	-	-	0	0	0								
9	25	61	10	30	0	0	0	3	6	9								

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE MASSACHUSETTS

MAJOR BASIN NORTHEAST

MINOR BASIN CONNECTICUT RIVER

STATION LOCATION CONNECTICUT RIVER BELOW NORTHFIELD, MASSACHUSETTS 11

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)										MICROINVERTEBRATES					
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE	OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	DOMINANT GENERA (See Introduction for Identification)
10	17	60	1200		70	50		70		730	270	200	420	91	10	62	10	56	10	2	10	60	70		1				-----7
10	24	60	2000			20		1100	160	530	180	260	150	91	10	62	10	56	10	59	10	50	40		5		1		4----7
11	8	60	300							270	20	130	430	59	10	92	10	56	10	62	10	50	20		1				-----7
5	1	61	100		20					20	70	50	160	2	20	92	10	14	10	9	10	60	50			2	2		------
6	5	61	600			20		80		120	350	20	390	92	30	14	10	31	10	47	10	50			11				------
6	19	61	1000	40		310		160	40	130	360	50	220	56	20	92	10	2	10	27	10	50			58	1	1		--1--
7	5	61	1500	20		390		230	100	270	440	80	330	47	30	59	10	56	10	2	10	50	20		743	25	1		3----
7	17	61	2000			420		350	20	500	680	100	190	56	50	47	40	9	10	92	10	10	100		37	8			34-77
8	7	61	2400	40		560		230	40	790	730	100	270	56	60	47	20	9	*	28	*	20		10	52	23	3	2	4---7
9	5	61	1700	60		440		440	40	620	120	150	80	56	80	58	*	47	*	9	*	10			347	10	3	1	---3-
9	18	61	4200		120	950		370	120	2130	500	310	190	56	80	82	*	27	*	58	*	10	270		179	6	1	1	4-947

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE MASSACHUSETTS

MAJOR BASIN NORTHEAST

MINOR BASIN CONNECTICUT RIVER

STATION LOCATION CONNECTICUT RIVER BELOW NORTHFIELD, MASSACHUSETTS 11

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
11	8	60	11	18	4497	230	104	126	4	24	44	15	5	23	1	10	7	1	14

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MASSACHUSETTS
MAJOR BASIN NORTHEAST
MINOR BASIN CONNECTICUT RIVER
STATION LOCATION CONNECTICUT RIVER BELOW NORTHFIELD, MASSACHUSETTS 11

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	24	60	–	–	8.0	1.6	12	–	–	.0	8	42	48	35	10	5	.1	86	440
11	8	60	9.5	11.2	7.2	1.7	14	5.3	12.5	.1	4	26	36	45	15	6	.1	66	1400
11	15	60	9.5	11.2	7.1	1.9	14	5.0	11.6	.1	5	26	32	35	1	6	.1	76	4800
5	1	61	5.5	11.6	7.0	1.8	19	1.0	3.9	.1	3	18	24	22	9	7	.6	46	–
5	2	61	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2400
5	8	61	9.0	11.3	7.1	1.5	15	1.2	2.6	.0	3	20	28	21	7	5	.3	51	3400
5	15	61	15.0	8.4	7.0	1.0	21	4.0	9.0	.0	3	18	24	22	16	6	.1	56	3000
5	22	61	13.0	9.2	7.0	1.2	17	3.0	7.2	.0	4	20	26	22	3	6	.0	46	–
5	23	61	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1400
5	29	61	11.0	9.5	7.2	1.2	17	2.7	6.3	.0	4	26	36	20	5	5	.0	61	4700
6	5	61	15.8	9.4	7.1	1.5	17	2.6	7.1	.0	3	26	34	20	2	6	.0	63	5700
6	12	61	17.7	8.1	7.1	1.3	17	3.4	4.2	.0	4	22	28	20	5	6	.0	75	1400
6	19	61	20.6	8.6	7.1	2.7	21	3.4	7.7	.0	45	24	34	15	3	4	.0	–	8000
6	26	61	20.4	8.2	7.1	1.2	21	3.9	8.8	.0	4	22	32	25	3	7	–	63	1000
7	5	61	22.2	8.0	7.2	2.4	19	3.4	7.9	.0	4	30	38	23	10	9	–	68	1200
7	10	61	22.8	8.3	7.3	2.4	21	3.5	7.7	.0	6	32	42	23	10	8	–	75	1300
7	17	61	21.8	6.8	7.1	1.5	18	2.8	7.1	.1	9	30	38	22	10	8	.0	69	9700
7	24	61	25.9	7.8	7.3	3.0	20	3.2	9.2	.1	7	36	44	22	15	9	.0	86	–
7	25	61	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6000
7	31	61	26.0	7.4	7.2	1.8	19	4.6	10.9	.1	10	37	40	22	8	9	.0	84	1700
8	7	61	25.4	5.6	7.0	3.5	23	4.0	9.4	.1	9	28	38	23	8	8	.0	79	3300
8	14	61	25.2	7.0	7.1	2.7	17	3.4	11.1	.0	7	32	38	23	6	12	.0	86	1400
8	21	61	23.5	6.0	7.1	3.0	24	3.1	9.4	.1	17	36	44	22	11	7	.0	100	–
8	22	61	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4800
8	30	61	24.0	7.1	7.2	3.4	23	3.8	9.0	.0	9	32	40	23	6	8	.1	81	1600
9	5	61	25.4	6.1	6.8	2.7	24	3.5	11.6	.0	16	20	26	23	8	8	.0	83	890
9	11	61	25.6	7.8	7.3	2.6	21	3.5	10.1	.0	14	36	46	22	6	8	.0	90	2000
9	18	61	21.3	7.8	7.4	3.1	26	3.3	9.2	.1	19	38	40	21	6	10	.1	105	1000
9	25	61	22.8	8.5	7.4	3.3	25	4.2	10.1	.1	15	36	40	21	7	11	.1	92	11000

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Computed Data for Vernon, Vermont
Supplied by U.S. Geological Survey

STATE Massachusetts

MAJOR BASIN Northeast

MINOR BASIN Connecticut River

STATION LOCATION Connecticut River below Northfield, Massachusetts

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	3.050	11.100	14.900	2.050	4.700	18.400	22.800	29.000	12.000	4.130	4.880	5.700
2	3.300	17.400	14.100	2.010	4.480	17.800	21.000	28.200	12.400	.721	4.140	.517
3	7.090	15.700	10.700	6.160	3.170	15.800	19.800	35.000	13.400	7.480	4.290	.395
4	6.800	15.500	2.480	6.760	2.470	16.600	16.300	33.600	15.700	6.880	4.590	.348
5	4.860	13.000	8.910	5.440	1.880	17.000	17.700	29.300	13.600	6.430	1.810	3.640
6	5.670	5.030	10.000	6.350	4.280	15.500	17.300	26.500	11.700	7.550	.321	3.340
7	3.110	8.040	10.000	3.730	4.090	18.300	18.400	22.600	10.400	6.300	3.050	3.470
8	.452	10.300	10.000	2.680	3.600	20.500	18.800	20.000	8.630	3.740	1.960	3.630
9	.403	9.650	8.390	5.200	4.200	17.800	17.700	21.200	11.200	.357	3.340	.712
10	4.120	10.000	4.320	4.640	4.400	14.600	16.200	30.000	12.200	6.170	4.630	.302
11	4.290	8.220	1.450	4.530	2.200	13.800	18.400	36.000	8.920	6.930	2.130	4.220
12	2.090	7.280	4.780	6.230	.802	12.700	19.500	33.000	10.300	6.900	.300	5.140
13	4.210	3.620	5.080	4.720	4.700	9.460	20.800	27.200	12.500	6.170	.285	4.220
14	4.090	7.740	4.450	3.010	4.400	11.300	20.100	20.400	12.700	6.350	.751	4.450
15	1.290	7.710	4.600	1.070	3.700	12.000	18.200	20.700	12.100	1.510	2.930	5.540
16	1.000	8.580	5.950	5.610	3.610	12.000	20.800	21.400	11.600	.349	2.940	1.080
17	4.060	9.570	4.430	5.930	3.910	11.100	23.100	16.400	8.640	6.770	2.900	.313
18	4.700	9.870	2.250	5.570	2.410	10.400	30.700	14.200	1.460	7.380	2.500	3.880
19	5.960	4.750	6.230	4.780	2.450	6.050	31.500	14.500	7.420	6.940	.275	4.900
20	9.390	.986	5.840	4.560	4.550	8.990	26.500	14.300	8.230	6.190	.273	7.280
21	8.700	8.170	6.600	1.560	6.220	8.190	26.200	11.400	7.150	6.510	3.520	5.220
22	5.020	8.680	5.550	1.510	5.830	8.970	31.000	9.460	8.430	5.210	3.680	3.460
23	2.300	8.140	5.880	4.630	7.480	9.260	43.300	11.700	11.300	1.650	3.070	.359
24	8.650	3.840	3.900	4.230	11.100	10.400	59.000	11.500	12.100	4.200	3.510	.369
25	12.400	7.000	3.280	4.030	9.930	12.400	51.900	12.100	3.110	5.490	3.690	2.510
26	20.400	5.100	2.540	4.320	19.300	9.610	49.400	10.200	7.410	6.500	1.510	2.600
27	16.300	2.180	5.920	4.710	25.700	12.900	52.800	10.800	8.130	7.480	3.330	2.400
28	15.800	7.800	4.990	2.310	23.000	15.200	45.600	14.300	8.300	6.460	3.790	2.950
29	15.000	7.080	6.130	1.410		26.600	41.300	13.900	8.000	2.430	6.090	2.820
30	9.190	14.800	5.420	4.400		32.700	36.400	14.000	6.600	.333	7.370	.281
31	7.960		3.440	4.700		26.400		11.400		3.800	8.170	

Computed as sum of Ashuelot River at Hinsdale, New Hampshire plus Connecticut River at Vernon, Vermont.

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE TENNESSEE

MAJOR BASIN OHIO RIVER

MINOR BASIN CUMBERLAND RIVER

STATION LOCATION CUMBERLAND RIVER AT

CLARKSVILLE, TENNESSEE 70

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA			DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
8	8	61	9	1	0	0	0	1	0	1							
8	15	61	9	12	0	0	0	4	1	5							
8	22	61	9	25	0	0	0	0	0	0							
8	29	61	9	25	0	0	0	0	6	6							
9	5	61	10	5	0	0	0	1	4	5							
9	26	61	10	11	0	1	1	6	9	15							

PHS-2845-5
REV. 4-61

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE TENNESSEE
MAJOR BASIN OHIO RIVER
MINOR BASIN CUMBERLAND RIVER
STATION LOCATION CUMBERLAND RIVER AT CLARKSVILLE, TENNESSEE

70

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
			TOTAL	BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR		COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFIERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
8	8	61	200					20		170		100		82	20	92	20	56	20	57	10	40							------
8	22	61	200			40		20		80	20	20	20	82	50	92	10	57	10	70	10	30	20						------
9	5	61	300			20		20		190	100	120	20	82	40	70	*	57	*	56	*	50			2	2	1		------
9	26	61	300			80		40		120	60	40	20	82	30	57	30	84	10	27	10	30	1350		6	3			------

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE TENNESSEE
MAJOR BASIN OHIO RIVER
MINOR BASIN CUMBERLAND RIVER
STATION LOCATION CUMBERLAND RIVER AT
CLARKSVILLE, TENNESSEE 70

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
8	7	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
8	15	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
8	22	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
8	28	61	-	-	7.5	-	-	-	-	-	4	56	84	5	-	27	-	-	-
8	29	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
9	5	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
9	26	61	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	20

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Dover, Tennessee
Operated by U.S. Geological Survey

STATE Tennessee

MAJOR BASIN Ohio River

MINOR BASIN Cumberland River

STATION LOCATION Cumberland River at Clarksville, Tennessee

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	7.100	9.540	17.600	38.800	14.400	72.200	48.500	27.100	20.200	20.200	9.090	18.500
2	5.600	9.220	16.600	48.400	12.900	65.800	52.200	40.000	15.800	18.600	11.200	22.200
3	5.570	10.600	18.200	37.500	12.500	51.900	46.500	45.200	15.200	15.900	12.600	15.600
4	7.140	11.200	19.500	26.800	14.900	43.600	43.100	39.800	14.700	16.400	12.100	14.600
5	9.840	9.030	12.900	24.900	19.900	45.300	44.300	34.000	15.100	14.100	11.000	10.700
6	8.120	8.200	12.300	19.400	20.000	53.000	45.900	38.400	18.200	13.100	10.900	10.100
7	7.700	8.310	15.000	20.300	16.300	65.700	44.800	42.200	20.100	12.900	9.050	11.100
8	7.140	11.800	15.200	24.700	23.300	79.100	43.800	37.100	20.600	7.850	8.630	17.600
9	6.460	15.500	15.700	20.800	28.900	101.000	42.600	38.200	35.900	4.620	9.420	15.900
10	7.210	12.600	15.700	18.300	27.400	109.000	39.900	36.900	40.900	10.500	9.540	11.700
11	8.100	16.600	16.100	14.200	20.800	103.000	37.700	33.700	32.600	10.300	10.200	11.300
12	8.000	17.400	17.300	18.800	15.400	92.800	45.100	21.400	23.100	9.320	13.700	13.200
13	10.200	16.100	17.900	21.900	13.700	86.400	66.100	14.200	19.600	8.140	8.330	13.200
14	8.180	17.200	17.100	22.200	14.100	82.800	78.500	14.800	21.500	9.940	9.240	12.500
15	7.850	14.000	16.800	23.500	15.600	72.600	74.100	15.500	41.400	14.300	13.400	11.400
16	7.880	8.050	17.300	20.600	14.900	66.000	78.700	23.200	51.200	15.100	14.200	10.100
17	7.900	8.080	18.000	19.400	13.100	62.700	83.300	30.300	40.700	11.300	9.160	7.430
18	7.820	11.300	17.700	17.800	13.700	59.100	79.600	32.400	20.800	12.900	8.500	7.680
19	11.400	12.500	15.100	19.100	13.000	59.500	69.700	46.000	17.800	16.500	7.220	10.700
20	16.100	9.500	15.400	23.300	14.500	60.100	55.100	50.600	19.300	21.400	8.100	11.000
21	17.000	11.800	16.400	25.300	22.600	62.800	49.700	37.800	25.500	21.600	6.730	10.100
22	11.000	9.570	20.000	26.600	36.800	72.900	49.900	31.600	25.600	18.800	6.210	10.700
23	12.900	12.400	24.200	25.100	51.800	68.700	47.500	29.900	24.800	17.200	8.030	11.000
24	10.400	10.900	21.500	21.200	50.400	63.200	43.500	27.600	22.400	11.900	9.740	12.800
25	8.510	12.000	14.800	19.700	48.100	57.000	43.600	22.000	21.600	14.600	11.800	12.700
26	5.310	9.540	11.900	21.300	50.800	53.500	39.600	25.300	24.400	12.400	9.990	9.740
27	5.380	8.750	12.300	20.700	54.400	49.400	35.300	26.700	25.700	14.800	8.290	11.100
28	4.830	8.680	13.600	17.600	55.700	45.100	38.700	22.100	24.700	15.000	8.430	7.810
29	6.260	9.890	14.900	17.900		47.600	29.700	19.100	23.100	17.600	10.700	6.780
30	5.990	17.400	24.300	18.800		47.300	25.200	15.000	20.800	17.500	10.800	7.900
31	8.720		33.200	15.600		43.800		17.600		12.000	13.900	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE PENNSYLVANIA

MAJOR BASIN NORTH ATLANTIC

MINOR BASIN DELAWARE-SCHUYLKILL RIVERS

STATION LOCATION DELAWARE RIVER AT PHILADELPHIA, PENNSYLVANIA 12

DATE SAMPLE TAKEN MO.	DAY	YEAR	DATE OF DETERMINATION MONTH	DAY	RADIOACTIVITY IN WATER ALPHA SUSPENDED μμc/l	ALPHA DISSOLVED μμc/l	ALPHA TOTAL μμc/l	BETA SUSPENDED μμc/l	BETA DISSOLVED μμc/l	BETA TOTAL μμc/l		RADIOACTIVITY IN PLANKTON (dry) DATE OF DETERMINATION MO.	DAY	GROSS ACTIVITY ALPHA μμc/g	GROSS ACTIVITY BETA μμc/g		RADIOACTIVITY IN WATER GROSS ACTIVITY SUSPENDED μμc/l	DISSOLVED μμc/l	TOTAL μμc/l
10	24	60*	11	8	2	0	2	0	0	0									
11	14	60*	12	27	2	0	2	0	0	0									
12	27	60*	1	13	1	1	2	3	3	6									
1	30	61*	2	13	1	0	1	0	0	0									
2	27	61*	3	10	1	0	1	0	0	0									
3	27	61*	4	10	0	1	1	0	0	0									
4	24	61*	5	12	1	0	1	1	0	1									
5	29	61*	6	9	0	1	1	0	0	0									
6	26	61*	7	13	0	0	0	0	0	0									
7	31	61*	8	28	0	0	0	5	6	11									
8	28	61*	9	14	0	0	0	0	4	4									
9	5	61	10	2	-	-	-	0	1	1									
9	19	61	10	30	-	-	-	0	2	2									
9	25	61	10	11	-	-	-	5	7	12									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE: PENNSYLVANIA
MAJOR BASIN: NORTH ATLANTIC
MINOR BASIN: DELAWARE-SCHUYLKILL RIVERS
STATION LOCATION: DELAWARE RIVER AT PHILADELPHIA, PENNSYLVANIA 12

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	4	60	400			20			40	130	220	20	240	62	20	2	10	93	10	16	*	60	20						------
10	17	60	1100		20	20		20		20	20	90	540	62	20	29	10	19	10	92	10	60	70						------
11	7	60	300							20	250	50	310	62	10	19	10	92	10	2	10	60							------
11	21	60	200							20	140	70	250	92	30	62	10	26	10	29	10	40							------
12	5	60	4400			40		20		90	290		180	92	60	29	10	62	*	19	*	30	70						----7-
12	19	60	300			20		20		90	200		420	92	40	29	10	62	10	19	10	40							------
1	10	61	400					40			310	20	250	92	40	36	10	62	10	2	*	30		20	1		1		----7-
2	2	61	500			20		20		50	380	130	290	92	20	62	10	29	10	36	10	70					6		------
3	6	61	300							20	270		70	92	20	2	10	93	10	70	10	60							------
3	20	61	800			40		90		90	530	20	560	92	20	93	10	86	10	70	10	60					2		----7-
4	4	61	1000				20	90		40	890	20	780	92	10	93	10	62	10	70	10	70	20				1		7-76-
4	10	61	600				20	20	20	50	470	50	470	9	20	93	10	2	10	92	10	60	50		1		4		3-----
5	1	61	2400			40		170	20	230	1900	40	910	92	20	62	10	9	10	93	10	60							3---7-
5	15	61	2100			100		210		270	1510	80	970	92	30	31	10	62	10	93	10	60			1		3	1	34-7-
6	5	61	2100		150	270		120	20	480	1040	80	1060	92	60	62	10	2	*	93	*	20							7---7
6	19	61	100			20		20			70	110	380	2	10	92	10	31	10	29	10	70							------
7	3	61	1400	20	120	620		100	20	190	290	80	520	92	20	29	10	93	10	56	10	60			4			1	-8---
7	17	61	1000			430		100		170	270	20	250	56	20	97	10	29	10	92	10	50	950						------
8	7	61	400	20		70		20	70	180	50	250	270	29	50	19	20	62	*	92	*	30	20		158				------
8	21	61	2100		40	500		100		1010	440	170	150	58	40	56	30	29	20	62	*	20			9	1			48-77
9	5	61	2000	20	20	230		190		1240	270	170	390	29	40	19	20	97	10	92	10	40			46	3	2		4---3
9	18	61	1600	40		390		120	20	850	150	150	190	29	50	56	20	26	10	97	10	20	20		55	1			4---7

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE	PENNSYLVANIA
MAJOR BASIN	NORTH ATLANTIC
MINOR BASIN	DELAWARE-SCHUYLKILL RIVERS
STATION LOCATION	DELAWARE RIVER AT PHILADELPHIA, PENNSYLVANIA

12

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
4	17	61	5	3	5800	165	58	107	2	14	20	5	3	12	0	7	5	1	9
5	31	61	6	13	6834	92	35	57	1	7	14	4	2	7	1	4	3	1	5

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE PENNSYLVANIA

MAJOR BASIN NORTH ATLANTIC

MINOR BASIN DELAWARE SCHUYLKILL RIVERS

STATION LOCATION DELAWARE RIVER AT

PHILADELPHIA, PENNSYLVANIA 12

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	19.0	6.6	7.1	-	10	-	-	.6	5	19	46	30	120	29	.3	162	49000
10	10	60	18.0	4.4	7.2	-	10	-	-	.8	4	28	52	30	115	31	.3	175	6700
10	17	60	17.0	6.0	7.3	-	8	-	-	.3	6	28	60	20	125	32	.2	147	9200
10	24	60	18.0	6.6	7.4	-	8	8.0	10.7	.6	7	35	211	20	150	24	.1	190	21000
10	31	60	13.0	7.6	7.2	5.0	-	6.3	8.1	.7	8	41	66	20	140	22	.2	286	6200
11	7	60	13.0	7.0	7.2	4.4	-	5.1	7.3	.4	8	38	64	15	135	30	.5	222	24000
11	14	60	11.0	9.0	7.2	4.0	11	7.3	8.9	.3	5	42	66	15	100	30	.2	260	17000
11	21	60	11.0	9.0	7.2	3.6	11	6.7	8.8	.6	9	41	66	5	120	29	.2	275	-
11	28	60	10.0	10.0	7.2	3.9	16	7.0	8.9	.8	11	40	60	5	155	30	.2	266	4000
12	5	60	9.0	8.2	7.3	4.8	7	5.3	7.7	.6	10	42	70	5	175	29	.1	261	-
12	6	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14000
12	12	60	7.0	11.5	7.2	4.4	8	4.4	6.3	.4	5	42	58	10	165	30	.1	233	-
12	13	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7000
12	19	60	3.0	8.4	7.3	-	8	8.3	9.6	.5	9	41	46	10	150	32	.2	253	-
12	27	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2800
1	3	61	1.0	12.8	7.2	4.2	12	7.0	9.3	-	12	36	64	-	105	35	.5	234	-
1	9	61	1.0	10.4	7.2	4.7	13	6.8	8.4	.7	13	36	66	15	120	35	.4	195	11000
1	16	61	1.0	10.4	7.2	5.0	13	8.8	9.7	.6	9	32	76	10	80	33	.3	162	25000
1	23	61	4.0	12.4	7.2	4.1	8	8.5	9.9	.5	15	39	72	5	50	33	.7	178	17000
1	30	61	1.0	12.0	7.2	3.9	10	10.6	11.9	.6	12	39	70	7	45	36	.4	169	9000
2	6	61	.6	13.2	7.2	2.0	9	10.0	12.0	1.0	14	41	78	10	65	34	.4	158	-
2	8	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1600
2	14	61	.6	11.0	7.1	3.9	12	8.3	9.7	1.4	17	39	100	15	40	40	.3	152	*200
2	20	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2600
2	21	61	3.0	12.0	7.2	2.9	13	7.1	9.3	.7	14	37	70	20	75	40	.3	152	-
2	27	61	5.0	12.2	7.1	4.4	12	6.9	8.9	1.0	4	33	80	35	85	20	.2	128	400
3	6	61	5.0	12.6	7.1	2.7	9	5.2	8.8	1.7	5	23	40	15	50	22	.4	99	7800
3	13	61	6.1	15.0	7.2	3.7	7	5.7	7.9	.5	7	22	48	10	30	23	.4	96	-
3	14	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6000
3	20	61	11.0	12.0	7.1	3.3	9	6.6	8.9	.5	12	26	78	5	60	27	.1	115	8000
3	27	61	7.8	10.3	7.2	1.9	3	5.5	7.8	.5	6	28	54	20	60	26	.4	164	-
4	3	61	8.3	11.4	7.2	2.8	14	5.8	8.1	2.3	6	29	42	15	45	26	.3	151	-
4	4	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12000
4	10	61	8.9	11.2	7.2	3.0	7	4.9	7.7	3.8	5	26	66	10	30	31	.3	128	330
4	17	61	11.1	11.4	7.1	2.6	11	5.3	8.4	3.8	3	24	40	30	45	26	.2	121	17000
4	24	61	12.2	9.2	7.2	3.8	6	5.5	7.0	2.8	5	27	48	10	28	27	.4	107	37000
5	1	61	7.8	9.6	7.1	3.1	10	6.9	8.3	.0	4	19	34	20	28	21	.2	109	-
5	8	61	15.0	8.6	7.2	1.7	8	5.2	7.1	.3	6	22	44	10	32	26	.2	143	-
5	15	61	15.0	8.3	7.2	*.1	9	5.8	8.8	.0	7	28	42	33	33	26	.5	79	4400

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE PENNSYLVANIA

MAJOR BASIN NORTH ATLANTIC

MINOR BASIN DELAWARE SCHUYLKILL RIVERS

STATION LOCATION DELAWARE RIVER AT PHILADELPHIA, PENNSYLVANIA 12

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
5	22	61	8.3	8.2	7.2	1.2	10	6.2	8.3	.1	10	30	52	5	32	20	.1	102	-
5	29	61	12.8	6.3	7.2	2.8	8	7.0	9.2	.0	13	29	62	5	55	27	.2	158	1200
6	5	61	21.1	5.8	7.2	1.4	10	7.4	8.7	.3	8	30	64	15	50	25	.3	-	-
6	12	61	22.8	4.6	7.2	1.2	10	8.2	9.0	.2	7	41	68	5	34	27	.2	87	27000
6	19	61	24.4	5.2	7.2	1.6	8	8.8	9.6	.1	9	43	60	10	50	26	.4	151	1700
6	26	61	22.8	4.2	7.2	4.6	13	9.1	10.4	.3	8	39	66	5	45	26	.4	183	*200
7	3	61	23.9	6.9	7.2	2.2	8	8.8	9.5	.1	24	40	68	5	35	23	.3	177	6000
7	10	61	24.4	4.9	7.1	2.1	10	6.9	8.0	.1	18	38	64	5	35	26	.3	-	7600
7	17	61	25.0	2.4	7.2	4.4	13	7.7	8.8	.2	8	40	68	20	60	30	.4	-	14000
7	24	61	26.1	4.4	7.2	3.2	14	8.0	8.9	.1	5	43	68	15	50	31	.4	128	12000
7	31	61	25.6	3.6	7.2	3.6	11	7.8	8.9	.0	14	41	78	20	70	30	.2	-	-
8	7	61	25.6	4.8	7.1	3.5	14	8.5	9.2	.4	7	37	64	35	40	27	.4	-	7600
8	14	61	27.2	5.4	7.1	3.2	13	6.9	8.5	.1	7	41	90	15	35	27	.4	-	-
8	21	61	25.0	4.4	7.2	2.8	11	7.7	9.3	.1	9	46	80	25	45	29	.2	119	1600
8	28	61	26.1	4.8	7.2	3.7	14	8.5	9.4	.3	7	46	84	5	27	31	.2	136	6400
9	5	61	26.7	4.2	7.0	2.8	12	5.6	8.8	.1	6	32	64	25	38	26	.3	-	3000
9	11	61	27.8	4.8	7.2	3.8	12	7.0	8.9	.3	5	40	82	25	35	30	.3	-	19
9	18	61	25.6	5.8	7.2	3.2	12	7.8	9.0	.3	6	41	78	10	35	31	.4	-	5600
9	25	61	23.9	5.5	7.2	2.5	12	7.9	8.4	.1	8	38	66	15	20	34	.3	-	15000

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Trenton, New Jersey
Operated by U.S. Geological Survey

STATE	Pennsylvania
MAJOR BASIN	North Atlantic
MINOR BASIN	Delaware-Schuylkill Rivers
STATION LOCATION	Delaware River at Philadelphia, Pennsylvania

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	12.200	6.100	7.400	4.600	3.900	46.100	28.300	23.600	7.650	5.300	6.140	6.600
2	13.300	7.450	8.550	6.200	3.600	37.000	25.500	20.700	7.800	5.100	6.700	5.900
3	11.300	7.700	8.250	6.000	3.350	30.200	22.900	19.800	7.800	4.740	5.980	5.580
4	10.000	7.400	7.080	5.500	3.600	26.100	20.000	18.800	7.450	4.280	5.900	4.980
5	10.000	7.300	6.140	5.000	3.700	25.700	17.600	17.000	6.750	4.140	5.500	4.240
6	9.500	7.000	5.780	5.000	3.800	25.700	16.200	15.000	5.860	4.210	5.460	3.930
7	9.050	6.260	5.660	4.800	3.800	34.500	15.100	13.700	5.740	4.070	5.020	4.420
8	8.750	5.860	5.780	4.800	4.000	41.900	14.200	13.800	5.660	3.930	5.060	5.020
9	8.050	6.140	5.860	4.600	4.100	38.800	13.300	15.600	5.420	3.900	4.380	4.520
10	7.040	7.300	5.420	4.400	4.500	32.600	15.200	19.600	6.020	3.960	4.070	4.210
11	6.220	8.550	4.980	4.660	4.300	25.800	17.000	24.200	8.050	3.820	4.420	4.140
12	6.960	7.800	3.700	5.100	4.150	21.800	17.200	24.200	9.740	4.240	4.820	4.100
13	6.650	7.500	3.000	5.020	4.000	20.200	24.900	23.500	10.500	4.100	4.700	3.900
14	6.260	6.700	3.500	4.520	4.200	23.500	30.900	22.800	9.620	3.590	4.490	4.100
15	6.180	6.020	4.000	4.740	4.500	23.700	28.600	20.300	8.400	4.000	4.000	4.070
16	6.020	6.180	4.500	4.700	4.800	21.400	29.300	19.800	7.350	6.400	3.290	4.520
17	5.220	6.350	5.000	4.600	4.800	20.000	37.400	20.100	6.450	5.260	2.930	4.180
18	4.660	6.220	5.000	4.940	5.140	17.800	41.600	18.600	6.060	4.320	2.990	3.380
19	5.260	6.060	4.500	4.800	8.660	17.200	37.300	16.600	5.500	3.930	3.350	2.900
20	6.840	5.980	4.000	3.500	15.000	17.100	33.900	15.000	4.820	5.300	3.410	3.110
21	8.800	5.380	4.800	4.000	15.500	15.600	28.600	13.400	4.700	7.350	3.900	4.140
22	8.300	4.940	4.900	4.500	17.400	14.600	25.000	12.300	5.340	6.060	4.240	4.940
23	7.700	5.100	5.000	4.500	24.600	16.600	24.000	11.700	7.200	5.420	4.630	4.560
24	6.350	5.580	4.200	4.250	25.800	20.000	24.500	11.100	9.050	5.020	5.820	3.960
25	5.860	5.540	4.100	4.500	36.300	17.800	28.000	10.500	10.200	6.920	6.140	3.790
26	6.550	4.940	4.200	4.800	71.600	17.000	55.700	9.900	8.450	7.500	5.660	3.650
27	6.800	4.560	4.100	4.800	89.700	16.200	53.800	10.900	7.700	7.300	9.500	3.350
28	6.800	4.630	3.800	4.500	60.600	16.300	39.600	10.500	6.920	6.260	11.700	3.530
29	6.840	4.380	3.900	4.500		21.000	32.700	9.560	6.100	7.650	12.000	3.230
30	6.920	5.700	4.200	4.200		35.500	27.400	8.850	5.500	6.260	9.620	3.200
31	5.940		4.000	4.000		34.100		8.400		5.460	7.950	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE PENNSYLVANIA

MAJOR BASIN NORTH ATLANTIC

MINOR BASIN DELAWARE-LEHIGH RIVERS

STATION LOCATION DELAWARE RIVER AT MARTINS CREEK, PENNSYLVANIA 61

DATE SAMPLE TAKEN			DATE OF DETERMINATION		RADIOACTIVITY IN WATER						RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
					ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	12	60*	10	20	0	1	1	0	1	1							
10	26	60*	11	7	-	-	-	0	0	0							
11	9	60*	12	22	0	1	1	0	0	0							
11	30	60*	12	12	-	-	-	0	0	0							
12	7	60	1	12	0	1	1	0	0	0							
12	28	60*	1	19	-	-	-	0	0	0							
1	11	61*	1	23	0	0	0	0	0	0							
2	1	61*	2	16	-	-	-	0	0	0							
2	15	61*	3	3	0	0	0	0	0	0							
3	1	61*	3	13	-	-	-	0	6	6							
3	15	61*	3	29	0	0	0	0	1	1							
3	29	61*	4	17	0	0	0	0	0	0							
4	26	61*	5	12	1	0	1	0	0	0							
5	31	61*	6	13	0	0	0	0	0	0							
6	28	61*	7	17	0	0	0	0	0	0							
8	2	61*	8	30	0	0	0	3	4	7							
8	30	61*	9	19	0	0	0	0	5	5							
9	6	61	10	5	-	-	-	1	0	1							
9	12	61	10	10	-	-	-	9	5	14							
9	20	61	10	19	0	0	0	20	4	24							
9	27	61	10	11	-	-	-	4	0	4							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE PENNSYLVANIA
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN DELAWARE-LEHIGH RIVERS
STATION LOCATION DELAWARE RIVER AT
MARTINS CREEK, PENNSYLVANIA 61

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS														PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE							
10	5	60	100							20	70		90	3	40	62	10	70	10	16	10	40			1				------
10	19	60	100			20		70			50		110	70	20	2	20	64	10	90	10	50			1				------
11	9	60	100									20	130										220		1				------
11	23	60	300		20			20			270			36	30	92	10	70	10	62	*	50	110		13				---4-
12	7	60	300		40			20			260			36	50	92	10	65	10	62	*	30	20	10	8				---4-
12	21	60	300		40	20				40	130		40	36	40	2	20	93	10	62	10	40			2				------
1	4	61	300		20	20					270	20	70	36	30	14	10	7	10	31	10	40			6				------
1	18	61	400								450		200	36	30	14	30	31	10	65	*	40			1				------
2	6	61	1000							70	920	20	310	14	30	36	30	62	10	93	10	30		10					---43
2	22	61	5400							270	5140	70	3260	62	20	36	10	14	10	70	10	50		10	13			1	7-743
3	8	61	500			20		20		20	400	20	180	2	20	62	10	16	10	92	10	60	50						------
3	22	61	400					90		40	270		90	2	20	92	20	62	10	16	10	50	70						------
4	5	61	500				20	90	20		380		220	9	30	93	20	2	10	31	10	40	70						3----
4	19	61	1000			20	40	150	20	60	680		270	31	30	9	10	52	10	93	10	40							----5-
4	26	61	4500			40	20	170		290	4000	40	1620	93	20	31	20	2	10	9	10	50					5		74753
5	17	61	800	20				50		110	580		510	92	20	31	10	2	10	93	10	60	20	60	33	3	6	1	3----
6	7	61	1400	20	60	230	20	210		230	660	40	310	31	20	2	20	92	20	47	*	30			15				7--3-
6	14	61	14400	80	230	6930	20	1180	20	2650	3270	60	1860	2	20	62	10	31	10	92	10	40	20	20	26	2	7	2	48923
6	28	61	3000		40	1020		270	20	370	1280	40	700	2	20	31	10	92	10	62	10	50			7		6		48723
7	12	61	1800	20	150	580		170	20	150	700	20	330	2	40	70	10	64	10	92	10	40			16	1		2	---33
8	9	61	900			130		100	20	120	560	20	170	62	30	2	20	92	10	64	10	40				1	2		----3
8	23	61				20				20		90	160	2	30	70	10	64	10	62	10	50			4	2	2	1	------
9	5	61	900	20		330		170		80	290	40	290	2	30	70	10	62	10	26	10	50			10	2			------
9	20	61	300			80	20		20	120	40		60	26	20	2	20	62	10	64	10	40							------

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE PENNSYLVANIA

MAJOR BASIN NORTH ATLANTIC

MINOR BASIN DELAWARE LEHIGH RIVERS

STATION LOCATION DELAWARE RIVER AT

MARTINS CREEK, PENNSYLVANIA 61

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	5	60	14.4	9.4	7.6	.3	4	.9	1.9	.2	2	23	42	37	38	10	-	61	420
10	12	60	14.8	9.3	7.6	.9	5	.1	.9	.1	3	26	42	14	23	10	.1	61	-
10	19	60	14.3	9.2	7.2	.8	7	.9	2.9	.2	3	28	42	23	25	10	.1	67	320
10	26	60	6.9	10.7	7.2	.2	4	.9	2.7	.2	2	26	34	21	22	11	.0	64	470
11	2	60	10.5	10.2	7.4	1.1	6	.8	2.0	.1	3	26	34	29	30	12	.3	60	1000
11	9	60	5.3	11.9	7.4	.1	6	1.0	2.8	.1	2	24	43	19	20	10	.0	54	1000
11	16	60	7.8	11.4	7.4	.7	2	.1	1.4	.1	4	24	48	18	19	11	.0	60	700
11	23	60	6.8	11.4	7.8	1.2	5	.3	-	.2	3	29	42	26	27	15	.0	59	-
11	30	60	6.7	11.0	7.6	1.0	-	-	-	.2	3	30	42	26	27	13	-	72	-
12	7	60	4.4	12.4	7.8	.9	-	-	-	.2	2	23	42	19	20	11	-	56	-
12	14	60	1.1	14.0	7.7	.6	-	-	-	.2	4	30	54	18	19	13	-	83	-
12	21	60	1.1	13.7	7.6	1.1	-	-	-	.1	4	25	40	15	17	11	-	61	-
12	28	60	.6	14.1	7.3	.9	-	-	-	.1	4	27	44	15	17	11	-	67	-
1	4	61	.6	13.4	7.3	1.0	-	-	-	.1	3	29	40	26	27	13	-	70	-
1	11	61	.6	14.1	7.3	1.0	-	-	-	.2	2	28	46	15	17	11	-	70	-
1	18	61	1.7	13.2	7.6	1.1	-	-	-	.1	3	31	46	19	21	11	-	72	-
1	25	61	.6	13.1	7.6	.5	-	-	-	.2	4	31	46	13	14	10	-	75	-
2	1	61	.6	13.1	7.5	.1	-	-	-	.3	4	30	38	15	16	11	-	70	-
2	8	61	.6	12.9	7.2	.9	-	-	-	.3	4	26	34	15	16	9	-	66	-
2	15	61	1.6	12.5	7.4	1.3	6	.3	-	.2	3	30	38	16	18	9	-	67	-
2	22	61	1.4	12.4	7.2	2.1	10	.3	.9	.3	4	17	35	22	23	8	-	51	62
3	1	61	2.8	13.3	7.1	.7	-	-	-	.3	2	9	34	43	45	10	-	39	-
3	8	61	5.4	12.3	7.2	.8	6	-	-	.2	3	9	36	55	57	9	-	39	170
3	15	61	3.4	12.9	7.3	.4	8	.1	-	.2	2	17	42	21	22	10	.1	50	460
3	22	61	4.4	12.3	7.4	.3	6	.1	1.8	.1	2	21	38	15	16	13	.2	54	270
3	29	61	9.0	10.5	7.4	1.4	6	.0	1.8	.1	4	13	42	21	22	13	-	42	600
4	5	61	6.0	11.5	7.4	.4	7	-	-	.1	3	13	26	19	20	12	.2	40	260
4	12	61	6.0	11.7	7.3	1.1	6	.6	2.0	.1	2	19	30	19	21	15	.0	43	270
4	19	61	7.2	11.1	7.2	.4	5	.2	1.1	.1	1	9	20	27	28	12	.0	34	310
4	26	61	11.8	11.2	7.2	2.0	24	-	-	.4	0	9	18	212	219	17	.2	29	1100
5	3	61	9.6	12.2	7.4	1.2	9	-	1.6	.1	0	14	24	22	23	12	.1	41	730
5	10	61	15.6	10.5	7.2	.8	7	-	1.8	.4	1	15	26	29	31	16	.1	45	640
5	17	61	17.8	9.8	7.4	2.3	7	-	-	.2	2	15	22	34	35	17	-	40	460
5	24	61	13.8	11.5	7.8	1.9	-	-	-	.1	2	20	28	26	27	15	.1	48	500
5	31	61	15.6	10.8	8.2	1.0	16	.7	1.7	.2	2	23	38	23	25	16	.1	56	5200
6	7	61	22.2	9.2	7.8	2.3	6	1.8	4.6	.1	2	28	30	25	26	17	.1	61	13000
6	14	61	25.6	7.2	8.3	3.8	8	-	1.9	.2	2	20	30	44	46	20	.1	53	7700
6	21	61	23.0	7.3	7.8	2.1	14	1.7	3.6	.2	3	28	34	35	37	16	-	64	360
6	28	61	22.0	7.6	7.5	-	12	2.1	4.8	.2	2	14	34	43	45	14	.1	49	-

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NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE PENNSYLVANIA
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN DELAWARE LEHIGH RIVERS
STATION LOCATION DELAWARE RIVER AT
MARTINS CREEK, PENNSYLVANIA 61

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	5	61	23.8	7.4	7.7	1.6	13	1.6	3.8	.1	3	26	36	36	38	15	–	57	–
7	12	61	23.4	7.8	7.8	1.3	11	1.2	3.0	.2	2	26	37	26	27	11	.1	52	–
7	19	61	26.0	7.4	7.9	1.0	12	1.3	3.1	.1	3	32	42	29	30	12	–	60	–
7	26	61	26.6	6.9	7.9	1.0	13	1.9	4.3	.2	3	37	48	38	39	15	–	66	66000
8	2	61	24.8	6.9	7.8	1.2	14	2.7	4.6	.2	2	29	42	40	42	20	.1	61	–
8	9	61	25.6	7.7	8.1	.9	14	1.7	3.6	.1	3	32	44	29	30	12	.2	61	21000
8	16	61	23.8	7.6	7.7	.3	9	1.3	2.8	.1	4	33	46	22	23	15	.1	62	7700
8	23	61	23.0	7.4	7.6	.9	15	1.2	2.6	.1	4	29	39	29	30	12	.1	54	8000
8	30	61	23.8	7.2	7.6	1.3	16	2.5	4.6	.3	2	24	34	59	61	9	.0	48	52000
9	6	61	26.6	7.0	7.9	.5	9	2.0	2.9	.2	2	30	40	33	34	11	.0	59	22000
9	13	61	25.6	7.0	7.9	.7	10	1.5	2.9	.1	2	27	36	25	26	11	.2	53	–
9	20	61	20.0	8.7	7.7	.2	7	1.2	2.0	.1	1	27	41	19	21	12	.1	56	–
9	27	61	21.6	7.6	7.7	.5	7	1.0	2.4	.1	2	32	42	18	19	12	.0	42	140000

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Belvidere, New Jersey
Operated by U.S. Geological Survey

STATE Pennsylvania

MAJOR BASIN North Atlantic

MINOR BASIN Delaware-Lehigh Rivers

STATION LOCATION Delaware River at Martins Creek, Pennsylvania

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	9.620	4.120	5.730	2.540	2.200	27.800	20.100	16.000	5.340	3.300	4.100	3.760
2	8.520	5.040	6.000	2.890	2.100	21.800	18.400	15.000	5.340	3.100	3.350	3.590
3	7.220	5.130	5.020	2.890	2.000	18.400	16.200	14.600	5.220	2.760	3.020	2.930
4	7.300	5.220	4.100	2.680	2.100	17.500	14.100	14.000	4.540	2.620	3.020	2.440
5	6.780	4.710	3.780	2.480	2.200	17.400	12.600	12.000	3.730	2.740	3.260	2.200
6	6.330	4.230	3.660	2.660	2.300	20.000	11.400	10.300	3.610	2.660	2.850	2.700
7	6.090	3.730	3.850	2.620	2.400	29.200	10.800	9.460	3.730	2.640	2.870	3.350
8	5.640	3.920	3.920	2.660	2.500	29.100	10.200	10.300	3.470	2.580	2.500	2.890
9	4.850	4.070	3.730	2.580	2.600	24.500	8.980	12.000	3.560	2.660	2.440	2.620
10	4.050	4.330	3.300	2.360	2.680	20.200	9.380	14.600	4.620	2.520	2.740	2.600
11	4.690	4.650	2.910	2.930	2.500	16.100	11.300	18.600	6.630	3.080	2.950	2.720
12	4.740	4.760	1.900	2.910	2.420	14.000	12.100	17.100	8.000	2.680	3.100	2.360
13	4.410	4.280	1.700	2.420	2.380	13.000	13.800	17.300	7.920	2.130	3.060	2.760
14	4.330	3.680	2.000	2.380	2.460	13.200	18.000	16.400	6.600	1.990	2.600	2.640
15	4.230	3.710	2.790	2.350	2.720	13.000	18.700	14.100	5.640	2.020	1.850	2.980
16	3.440	4.120	3.170	2.330	2.870	13.100	19.200	14.100	4.680	2.480	1.520	2.870
17	2.870	4.070	3.250	2.380	2.810	12.100	27.500	14.100	4.310	2.440	1.820	2.110
18	3.350	4.020	3.300	2.910	2.850	10.400	28.100	12.900	3.760	2.230	2.180	1.620
19	3.830	3.970	2.680	2.640	3.590	9.780	26.000	11.200	3.150	2.330	2.230	1.850
20	5.040	3.490	2.520	2.200	5.640	9.900	23.400	10.100	3.020	3.320	2.090	2.070
21	5.700	3.040	3.300	2.600	8.400	9.500	19.700	8.550	3.170	3.590	2.220	3.080
22	5.340	3.170	3.170	2.500	12.500	9.100	17.500	8.040	4.020	3.300	2.560	3.150
23	4.200	3.780	3.300	2.400	14.000	9.340	17.200	7.840	5.040	3.120	3.420	2.640
24	3.610	3.730	2.850	2.300	14.600	10.500	19.300	7.570	7.510	2.330	4.020	2.620
25	4.070	3.280	2.660	2.600	30.200	10.400	28.700	6.780	6.030	3.000	3.230	2.500
26	4.510	2.830	2.460	2.800	57.800	10.200	53.400	6.720	5.100	4.330	4.760	2.230
27	4.510	3.040	2.460	2.800	60.300	10.100	38.500	7.390	4.600	3.950	5.370	2.460
28	4.410	2.700	2.290	2.700	37.300	12.000	27.800	6.780	4.050	2.830	9.300	2.160
29	4.760	2.760	2.500	2.600		21.300	22.600	5.940	3.540	2.480	7.420	2.130
30	3.970	4.020	2.480	2.500		29.800	20.000	5.850	3.350	2.620	5.670	2.110
31	3.660		2.600	2.400		24.300		5.250		2.230	4.310	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE FLORIDA

MAJOR BASIN SOUTHEAST

MINOR BASIN PERDIDO-ESCAMBIA RIVERS

STATION LOCATION ESCAMBIA RIVER AT CENTURY, FLORIDA

62

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	3	60	10	24	0	0	0	0	0	0								
10	17	60	11	8	0	2	2	0	0	0								
11	7	60	11	28	2	1	3	0	0	0								
11	15	60	11	30	0	1	1	0	0	0								
12	28	60	1	18	0	0	0	0	0	0								
1	23	61	2	6	1	1	2	0	0	0								
2	13	61	2	27	0	0	0	0	0	0								
3	6	61	3	23	0	0	0	0	0	0								
3	21	61	4	10	2	0	2	0	0	0								
6	16	61	7	28	1	0	1	0	0	0								
8	5	61*	8	30	0	0	0	8	5	13								

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE FLORIDA
MAJOR BASIN SOUTHEAST
MINOR BASIN PERDIDO ESCAMBIA RIVERS
STATION LOCATION ESCAMBIA RIVER AT
CENTURY, FLORIDA 62

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)										MICROINVERTEBRATES					
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE	OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	PROTOZOA (No. per ml.)	ROTIFIERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	DOMINANT GENERA (See Introduction for Identification)
11	7	60	100			20						40	20	43	10	33	10	44	10	1	*	70	180		2				------
12	28	60	100			20					90		70	33	10	43	10	2	10	62	10	60	20				1		------
1	23	61	100								110		20	43	20	2	10	33	10	31	*	60							------
2	13	61												33	10	1	*	65	*	2	*	70							------
3	6	61	100					20		50	50		20	80	20	92	10	56	10	83	*	60	50		2				------
3	21	61	400			90	20	160			90	20	90	92	20	3	10	73	10	52	*	70			5	1	1		------
6	26	61	300							100	170		100	43	20	92	10	2	10	31	10	60							------
7	6	61	100							40	40	20	20										560						------
7	24	61	200					100		20	100	40	40	2	10	92	*	32	*	28	*	80			5		5		------
8	5	61	1100			170		60		750	120	480	40	82	50	27	20	26	10	16	*	10	500		5		1		4-9--

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE FLORIDA
MAJOR BASIN SOUTHEAST
MINOR BASIN PERDIDO-ESCAMBIA RIVERS
STATION LOCATION ESCAMBIA RIVER AT CENTURY, FLORIDA

62

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES					CHLOROFORM EXTRACTABLES								
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	10	60	11	14	2699	382	166	216	3	33	65	12	6	42	5	25	13	2	25
2	6	61		*	2200	409	115	294	3	28	38	4	3	27	4	13	7	2	24

*NOT GIVEN

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE FLORIDA

MAJOR BASIN SOUTHEAST

MINOR BASIN PERDIDO ESCAMBIA RIVERS

STATION LOCATION ESCAMBIA RIVER AT

CENTURY, FLORIDA 62

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	4	60	20.0	7.0	6.9	1.0	36	.2	1.8	.2	3	21	16	14	150	3	.1	83	3400
10	10	60	19.0	7.1	6.7	.6	26	.4	2.3	.2	3	18	24	6	45	3	.3	51	-
10	17	60	20.0	6.8	6.8	.9	40	1.0	2.8	.4	4	20	19	8	40	3	.1	73	5900
11	7	60	16.0	7.3	6.8	.7	44	.3	1.1	.5	3	18	23	4	60	3	.1	69	4000
11	14	60	14.0	7.9	6.6	.8	40	.2	1.7	.4	3	15	17	6	10	2	.1	43	-
11	15	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7400
12	28	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100000
1	23	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1700
2	13	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2200
3	6	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260
3	21	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1100
7	6	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	900
7	24	61	25.2	6.3	6.8	1.6	21	2.1	4.0	.1	11	25	28	45	85	7	.1	7	-
7	25	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1500
7	31	61	26.7	6.6	6.9	2.5	21	-	-	.1	17	27	34	60	0	-	-	81	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station near Century, Florida
Operated by U.S. Geological Survey

STATE Florida

MAJOR BASIN Southeast

MINOR BASIN Perdido-Escambia Rivers

STATION LOCATION Escambia River at Century, Florida

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	3.780	1.540	3.020	4.180	4.660	41.900	28.500	8.210	3.080	9.760	3.560	3.980
2	3.200	1.540	2.440	4.930	4.360	47.300	31.900	8.420	2.930	7.910	3.170	6.510
3	2.920	2.040	2.000	4.410	4.240	49.700	30.400	8.910	2.700	6.430	2.940	8.440
4	2.650	2.210	1.790	3.690	4.770	45.900	28.500	8.640	2.470	5.350	3.160	9.980
5	2.280	2.030	1.690	3.350	4.680	38.300	27.300	7.590	2.410	4.780	4.270	11.600
6	2.470	1.660	1.640	3.170	4.410	28.800	26.800	6.730	2.300	4.610	5.190	13.000
7	3.660	1.500	1.630	2.910	5.780	20.300	27.300	6.260	2.150	4.550	6.080	13.600
8	4.490	1.420	1.640	3.070	7.400	14.800	25.500	5.920	2.110	4.380	7.120	12.400
9	3.510	1.460	1.640	3.550	7.670	11.900	22.500	5.970	2.030	4.680	7.160	9.050
10	2.980	1.570	1.890	3.310	7.100	11.300	21.200	6.470	1.990	4.520	5.890	6.180
11	2.880	1.570	2.110	2.980	6.370	11.000	20.600	6.570	2.110	4.460	4.660	5.380
12	2.700	1.520	2.170	2.770	5.630	10.100	28.000	5.940	2.350	4.800	4.110	5.220
13	2.390	1.540	2.060	2.650	5.010	9.550	36.200	5.660	2.490	5.880	3.790	5.710
14	2.180	1.520	2.220	2.850	4.420	9.410	36.600	5.460	2.410	6.200	3.310	5.910
15	2.030	1.540	2.390	3.250	4.130	9.380	35.800	4.860	3.480	5.550	3.920	6.180
16	2.000	1.450	2.950	3.280	3.950	8.870	35.400	4.440	5.750	5.160	4.070	6.410
17	2.020	1.500	3.310	3.020	3.780	8.800	33.100	4.230	5.940	4.990	3.520	5.230
18	1.930	1.580	2.910	3.070	4.110	18.000	30.800	4.060	4.680	5.550	3.400	4.620
19	1.760	1.630	2.500	3.140	12.500	24.800	27.800	3.850	4.580	5.730	3.040	4.180
20	1.730	1.700	2.390	3.110	20.900	25.700	23.700	3.530	6.980	5.260	2.800	3.830
21	1.700	1.640	3.020	3.220	26.400	23.200	19.000	3.290	15.500	5.300	2.660	3.570
22	1.670	1.550	3.970	2.930	27.700	20.500	14.400	2.820	19.200	5.720	2.380	3.260
23	1.680	1.720	3.960	2.600	32.000	18.200	11.300	2.560	16.800	5.880	2.340	2.970
24	1.600	2.460	3.040	2.650	35.600	15.500	9.500	2.530	14.700	5.720	2.640	2.800
25	1.620	2.700	2.580	3.700	39.400	12.700	8.520	2.980	14.600	4.430	3.040	2.440
26	2.190	2.250	2.640	6.670	46.800	10.300	7.790	3.760	13.900	3.780	3.590	2.430
27	2.540	1.980	2.450	8.300	53.100	8.720	7.610	4.750	14.600	3.450	3.830	2.690
28	2.100	2.080	2.620	7.560	45.900	9.020	8.770	5.190	15.400	3.690	3.590	2.720
29	1.680	3.450	2.650	6.420		11.000	9.950	4.060	14.900	4.650	3.410	2.420
30	1.580	3.560	2.620	5.660		13.000	9.100	3.450	12.200	4.610	3.120	2.220
31	1.590		2.980	5.010		20.700		3.430		4.060	2.980	

RADIOACTIVITY DETERMINATIONS

STATE NEW YORK

MAJOR BASIN NORTHEAST

MINOR BASIN LAKE ERIE-NIAGARA RIVER

STATION LOCATION LAKE ERIE AT

BUFFALO, NEW YORK 14

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	26	60*	11	3	1	2	3	0	0	0									
12	1	60*	12	15	1	2	3	0	0	0									
12	22	60	1	19	1	0	1	2	0	2									
2	1	61*	2	10	0	2	2	0	0	0									
3	1	61*	3	16	0	0	0	0	0	0									
3	29	61*	4	6	0	0	0	0	0	0									
4	26	61*	5	11	0	1	1	0	0	0									
5	31	61*	6	8	0	1	1	0	0	0									
6	28	61*	7	13	0	0	0	0	0	0									
8	2	61*	8	24	0	0	0	7	11	18									
8	28	61*	9	21	0	0	0	0	9	9									
9	6	61	9	28	0	0	0	0	4	4									
9	13	61	10	5	-	-	-	0	0	0									
9	20	61	10	18	-	-	-	4	16	20									
9	27	61	10	5	-	-	-	3	0	3									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE NEW YORK

MAJOR BASIN NORTHEAST

MINOR BASIN LAKE ERIE NIAGARA RIVER

STATION LOCATION LAKE ERIE AT

BUFFALO, NEW YORK 14

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	5	60	100	20		20				20	20		70										20		14				------
10	19	60	300					20	50	220	50	40	110	95	40	47	20	49	20	83	10	20	40		21	6			-----7
11	2	60	200			50				50	110	50	70	49	50	83	30	95	10	47	10	10	50	20	22	1			------
11	16	60	500	70		20		20	20	270	70	40	130	49	60	83	20	95	10	84	*	10	20	10	13	1			--9--
12	7	60	400					70		260	40	40	180	83	40	48	40	97	10	47	*	10	20		5				--9--
12	14	60	600			20			40	440	70	40	70	45	50	83	20	97	10	80	*	10		10	11			1	--9--
12	22	60	200			40				160	20	70	70	45	40	97	20	83	10	80	10	10	70		3				------
1	4	61	1300			20				220	1010	70	70	97	50	83	20	80	20	45	10	*		10					--9--
1	18	61	400			20				340	50	180	200	97	40	45	20	80	20	82	20	10							--9-7
2	1	61												97	70	95	10	80	10	45	*	10		30	3	2			------
2	15	61								20	20		20											30	3	1			------
3	1	61																					20	30	5				------
3	15	61	200			20				180														10					--9--
4	6	61	1200			20		160	20	920	110	360	40	97	40	80	30	82	10	83	10	20	20	30	23				--9-7
4	19	61	100			20			20	50		110	50	45	40	97	30	95	10	80	10	10		20	28	9			------
5	3	61	600			20				110	420	490	630	97	30	45	20	80	10	35	10	30			219	59			---4-
5	17	61	1700	80	120	710		40		210	540	370	390	97	40	80	20	46	20	35	10	20			233	66			7--25
6	7	61	100			40				20															85	76			------
6	21	61	200			120			20		20	20													517	66		1	------
7	5	61	300			130		20	20	80	20		40												32	14			------
7	19	61	300			40	90	40	50	20		70	20	47	70	45	30						20		48	14			------
8	2	61	100		20	70			40			20		47	90	45	10	95	*	96	*	*	20		172	24	1		------
8	16	61	300		20	40		40	20	40	100		20	47	70	45	10	95	10	97	*	10			234	4			------
9	6	61				20				20				47	40	45	20	95	10	26	10	20			312	2	1		------
9	20	61	200	80	60	20		60						47	20	82	20	83	10	97	10	30			113	4			------

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE NEW YORK
MAJOR BASIN NORTHEAST
MINOR BASIN LAKE ERIE-NIAGARA RIVER
STATION LOCATION LAKE ERIE AT BUFFALO, NEW YORK 14

DATE OF SAMPLE: BEGINNING MONTH	BEGINNING DAY	BEGINNING YEAR	END MONTH	END DAY	GALLONS FILTERED	EXTRACTABLES: TOTAL	EXTRACTABLES: CHLORO-FORM	EXTRACTABLES: ALCOHOL	CHLOROFORM EXTRACTABLES: ETHER INSOLUBLES	WATER SOLUBLES	NEUTRALS: TOTAL	NEUTRALS: ALIPHATICS	NEUTRALS: AROMATICS	NEUTRALS: OXYGEN-ATED COMPOUNDS	NEUTRALS: LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	5	60	10	13	4747	221	33	188	1	9	12	2	1	9	0	3	2	1	5
10	26	60	11	2	4380	179	42	137	2	12	12	1	1	9	1	5	3	1	7
11	21	60	11	30	4853	152	42	110	3	11	13	2	1	9	1	4	3	1	7
12	16	60	12	23	2970	200	42	158	3	10	15	3	2	10	0	4	2	1	7
1	11	61	1	19	4650	179	41	138	1	8	18	1	1	15	1	7	2	1	4
2	6	61	2	14	5130	164	40	124	3	10	9	1	0	8	0	4	3	1	10
2	28	61	3	10	5033	156	33	123	1	8	11	1	1	8	1	3	2	1	7
4	3	61	4	13	4733	152	45	107	-	-	-	-	-	-	-	-	-	-	-
6	5	61	6	14	4755	197	86	111	-	-	-	-	-	-	-	-	-	-	-
6	5	61		*	9488	175	66	109	4	17	20	3	2	14	1	8	6	1	10
7	3	61	7	12	4252	216	63	153	-	-	-	-	-	-	-	-	-	-	-
7	25	61	8	3	5062	207	68	139	-	-	-	-	-	-	-	-	-	-	-
8	19	61	8	29	5385	160	58	102	-	-	-	-	-	-	-	-	-	-	-
8	19	61		*	14699	192	63	129	4	15	17	2	2	12	1	7	6	2	13

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NEW YORK

MAJOR BASIN NORTHEAST

MINOR BASIN LAKE ERIE-NIAGARA RIVER

STATION LOCATION LAKE ERIE AT

BUFFALO, NEW YORK 14

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	5	60	18.0	9.0	8.3	1.0	5	.4	1.8	.0	23	86	128	0	4	23	.2	205	5
10	13	60	17.5	8.7	8.2	.4	8	.3	2.0	.0	23	82	126	0	5	23	-	197	3
10	19	60	16.5	9.5	8.1	.4	7	.3	-	.0	23	80	128	0	5	23	-	213	6
10	26	60	14.0	9.6	8.2	.6	7	.3	2.1	.0	23	82	128	0	20	22	.1	216	*4
11	2	60	13.0	10.0	8.2	.9	3	.4	2.0	.0	20	82	130	0	20	22	.2	195	*4
11	9	60	11.5	9.7	8.1	-	5	.3	2.0	.0	23	94	128	0	15	23	.2	203	310
11	16	60	11.5	11.0	8.2	.8	5	.3	1.3	-	23	97	130	0	20	23	.2	207	64
11	23	60	11.0	11.2	8.2	1.0	7	.3	-	.0	20	94	136	0	10	22	.2	197	-
12	1	60	7.0	11.4	8.3	2.0	12	.6	2.8	.0	23	96	140	0	50	23	.2	199	240
12	7	60	9.0	12.2	8.0	1.4	11	.6	2.2	.0	23	98	123	0	10	22	.1	-	24
12	14	60	4.5	12.9	7.8	1.3	6	.9	2.6	.0	23	88	134	-	50	23	.2	204	12
12	22	60	2.9	13.9	8.0	1.0	6	.8	2.6	.0	20	94	128	0	30	22	.5	199	3
1	4	61	4.5	14.0	8.2	1.9	12	.6	2.0	.0	23	92	128	0	15	23	.1	206	*4
1	11	61	3.0	12.5	8.1	2.2	9	.5	1.7	.0	20	92	128	-	25	23	.1	188	2
1	18	61	3.0	14.5	8.3	2.5	17	.5	1.6	.0	23	96	128	0	30	22	.1	181	3
1	25	61	3.0	14.2	8.2	1.7	17	.5	1.9	.0	23	98	128	0	15	22	.5	190	*4
2	1	61	3.0	14.3	8.1	1.0	13	.3	2.2	.0	25	96	138	0	5	26	.1	180	*1
2	9	61	4.0	14.2	8.0	1.4	6	.5	1.6	.0	25	98	136	0	7	24	.1	209	*1
2	15	61	4.0	14.5	8.1	-	16	.2	1.9	.0	20	100	134	0	7	24	.4	229	*1
2	23	61	6.0	14.7	8.2	-	7	.2	1.2	.1	23	88	138	0	5	23	.1	198	9
3	1	61	4.5	14.3	8.2	1.1	8	.2	1.8	.0	23	96	140	0	6	22	.1	191	*1
3	8	61	4.0	14.0	8.0	1.3	9	.2	1.0	.0	23	94	136	0	10	24	.5	189	58
3	15	61	4.0	13.6	8.2	1.4	9	.7	2.1	.0	20	96	132	0	10	23	.1	202	100
3	22	61	3.0	12.7	8.0	1.1	9	.2	1.5	.0	20	88	130	0	20	24	.5	196	*1
3	29	61	4.5	13.7	7.7	2.0	8	.2	1.2	.0	23	82	132	0	10	23	.1	179	-
4	6	61	4.0	13.2	8.2	1.6	10	.6	2.6	.0	20	90	126	0	25	21	.5	191	3
4	12	61	6.0	13.4	8.1	2.0	9	.3	1.2	.0	23	88	136	0	20	22	.0	217	1
4	19	61	7.0	13.5	8.1	1.2	8	.3	1.3	.0	23	86	124	0	20	21	.1	176	7
4	26	61	6.0	12.5	7.9	1.5	9	.7	2.2	.0	20	88	126	0	20	21	.1	175	*1
5	2	61	7.5	11.0	8.0	2.5	9	.8	2.2	.0	20	80	120	0	100	21	.1	180	80
5	10	61	10.0	12.0	8.3	1.7	7	.8	2.2	.0	20	84	120	0	10	21	.1	171	2
5	15	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
5	16	61	4.0	11.2	8.2	2.7	6	.8	2.9	.0	20	80	120	0	15	20	.1	171	-
5	24	61	12.0	12.0	8.2	2.3	8	1.0	2.0	.0	20	80	120	0	10	20	.5	154	*1
5	31	61	13.0	10.6	8.2	1.8	8	.3	2.2	.0	23	82	132	0	10	20	.1	176	8
6	7	61	15.0	10.1	8.2	2.4	10	.8	2.9	.0	23	80	120	0	10	20	.1	259	*4
6	14	61	18.0	8.9	8.1	1.9	9	.1	.3	.0	-	80	130	-	10	22	-	210	*1
6	21	61	16.5	9.5	8.2	2.1	5	1.4	2.0	.0	23	82	130	0	14	20	.1	206	180
6	28	61	17.0	9.5	8.3	1.2	5	1.2	2.0	.0	20	92	132	0	10	23	.0	178	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NEW YORK

MAJOR BASIN NORTHEAST

MINOR BASIN LAKE ERIE-NIAGARA RIVER

STATION LOCATION LAKE ERIE AT BUFFALO, NEW YORK

14

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
7	5	61	17.5	8.5	8.2	.9	10	1.6	2.3	.0	23	80	122	0	10	21	.1	220	-
7	12	61	20.5	8.9	8.3	-	11	1.6	3.0	.0	23	90	126	0	8	23	.1	214	*40
7	19	61	21.5	9.2	8.5	-	10	1.4	2.8	.0	25	84	130	0	10	23	.1	220	-
7	26	61	24.1	8.9	8.3	-	11	.7	2.7	.0	20	88	126	0	6	24	.1	209	*10
8	2	61	23.3	7.9	8.5	-	13	.9	2.0	.0	23	84	126	0	5	17	.1	208	40
8	16	61	22.6	8.0	8.4	-	12	1.8	2.0	.0	23	88	128	0	10	18	.1	241	-
8	23	61	24.0	8.4	8.3	4.7	16	.8	2.0	.0	23	88	138	0	6	21	.1	217	10
8	31	61	24.0	8.0	8.4	2.9	17	.6	1.5	.0	23	86	132	0	10	22	.1	196	-
9	6	61	24.0	8.4	8.4	1.9	20	.2	2.4	.0	23	82	126	0	10	22	.1	208	*10
9	13	61	24.5	8.0	8.3	.8	17	1.2	2.0	.0	20	88	122	0	13	22	.1	199	55
9	20	61	23.0	8.5	8.3	.7	11	.2	1.4	.0	26	92	124	0	12	22	.9	200	*4
9	27	61	22.0	7.8	8.0	.8	13	.9	2.9	.0	23	84	124	0	50	20	.1	233	30

STREAM FLOW DATA - 1960-1961	STATE: New York
Thousand Cubic Feet per Second	MAJOR BASIN: Northeast
PROVISIONAL--SUBJECT TO REVISION	MINOR BASIN: Lake Erie-Niagara River
Supplied by U.S. Army Corps of Engineers U.S. Lake Survey	STATION LOCATION: Lake Erie at Buffalo, New York

October	November	December	January	February	March	April	May	June	July	August	September

FLOW DATA NOT APPLICABLE --- LAKE LEVELS ONLY

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE MICHIGAN

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN ST. CLAIR-DETROIT RIVERS

STATION LOCATION DETROIT RIVER AT

DETROIT, MICHIGAN

15

DATE SAMPLE TAKEN			DATE OF DETERMINATION		RADIOACTIVITY IN WATER						RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
					ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	26	60*	11	15	0	1	1	2	1	3							
11	29	60*	12	9	0	0	0	0	0	0							
12	27	60*	1	12	0	1	1	0	0	0							
1	24	61*	2	24	0	0	0	0	1	1							
2	7	61	3	23	0	0	0	0	0	0							
4	11	61	5	22	0	1	1	0	0	0							
5	23	61*	6	23	0	0	0	0	0	0							
6	20	61*	7	26	0	0	0	0	0	0							
7	25	61	8	28	2	0	2	0	0	0							
8	29	61*	9	18	0	0	0	3	5	8							
9	6	61	9	28	-	-	-	2	4	6							
9	11	61	10	6	0	0	0	0	0	0							
9	19	61	10	18	-	-	-	7	53	60							
9	26	61	10	3	-	-	-	2	3	5							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE MICHIGAN

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN ST. CLAIR-DETROIT RIVERS

STATION LOCATION DETROIT RIVER AT

DETROIT, MICHIGAN 15

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	4	60	100			70					50	50	1180	46	30	48	10	47	10	25	10	40		10	1				------
10	18	60	100					50	20	50	20	40		25	20	46	10	47	10	24	10	60	20		1	1			------
11	2	60	200			20				110	90	40	370	25	20	47	20	24	10	46	10	40	40						------
11	15	60	300	20		50		50		50	90	90	90	25	20	46	10	62	10	47	10	50	70		2				------
12	6	60	100			40					70	90	130	47	20	46	10	30	10	25	10	50							------
1	3	61	100	20		20					70	70	110	35	40	95	10	45	10	47	10	40			1	3			------
1	18	61	300							70	270		70	57	40	45	10	95	10	9	10	40			2	2			------
1	31	61	400							20	360	50	130	35	40	95	10	45	10	47	10	30		10	9	2			---4-
2	7	61	200								250	20	220	45	60	47	10	35	10	95	10	10			9				3----
2	15	61	300								270		40	95	30	35	30	45	10	47	10	30				1			3----
3	15	61	1500			70				200	1240	90	960	35	30	95	20	45	20	47	10	30		10	3	4			7--46
3	28	61	300			40				20	250	50	220	95	30	47	10	60	10	45	10	40			3	2			------
4	4	61	900			50		20	20	90	670	90	290	95	30	47	10	46	10	48	10	50			3	1			---86
4	15	61	1300			80			80	210	890	40	580	47	20	95	20	35	10	46	10	50			4				7--46
4	25	61	600			20		20	40	310	210	100	230	95	30	47	10	89	10	92	10	30	20		21	4			------
5	2	61	700			20			70	70	510		270	95	30	47	20	89	10	92	10	30	20						7----
5	16	61	1100			40			40	210	790	40	370	95	40	47	20	92	10	60	10	30			42	11	1		7----
5	30	61	1400			40		40		440	910	150	250	95	30	92	20	47	10	89	10	30			7	4			7-9--
6	8	61	2300	20	20	20		20		1060	1140	190	170	95	30	82	20	47	10	35	10	20			71	9			3-94-
6	20	61	900			80		20	20	80	700	150	190	95	50	47	20	24	10	45	*	20			35	2			---7-
7	4	61	500			40		40	40	150	250	60	270	95	20	25	10	47	10	30	10	50			13	5			------
7	18	61	800			40		20	40	310	370	80	370	47	30	24	10	95	10	92	10	40		10	36	48	1		34---
8	8	61	100							60	60	20	40	25	30	48	10	46	10	56	10	40			3				------
8	22	61	300					20		100	150	60	80	25	40	56	10	47	10	48	10	40			14				------
9	6	61	200			60		20	20	80	20	20	40	80	50	25	20	82	10	16	*	20			136	2			------
9	19	61	200			60			20	60	60		40	56	60	47	10	46	10	82	10	20			10				------

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE MICHIGAN
MAJOR BASIN WESTERN GREAT LAKES
MINOR BASIN ST. CLAIR-DETROIT RIVERS
STATION LOCATION DETROIT RIVER AT
DETROIT, MICHIGAN 15

Beginning Month	Beginning Day	Beginning Year	End Month	End Day	Gallons Filtered	Extractables Total	Extractables Chloroform	Extractables Alcohol	Ether Insolubles	Water Solubles	Neutrals Total	Aliphatics	Aromatics	Oxygenated Compounds	Neutrals Loss	Weak Acids	Strong Acids	Bases	Loss
10	4	60	10	18	12800	62	11	51	0	3	5	1	1	3	0	1	1	0	1
11	1	60	11	15	8872	63	14	49	0	4	5	1	1	3	0	1	1	0	3
12	6	60	12	21	1920	228	33	195	2	9	12	3	2	6	1	4	1	1	4
1	10	61	1	20	10980	63	9	54	0	3	4	1	0	3	0	1	0	0	1
2	7	61	2	21	4680	136	25	111	1	8	7	1	0	6	0	3	1	0	5
3	7	61	3	21	4159	117	21	96	1	5	10	2	1	7	0	2	1	0	2
4	5	61	4	18	7380	63	21	42	-	-	-	-	-	-	-	-	-	-	-
5	2	61	5	16	3360	155	34	121	-	-	-	-	-	-	-	-	-	-	-
6	5	61	6	20	4005	151	37	114	-	-	-	-	-	-	-	-	-	-	-
6	5	61		*	14745	108	28	80	3	6	9	2	1	6	0	4	2	0	4
7	11	61	7	25	10500	141	22	119	-	-	-	-	-	-	-	-	-	-	-
8	8	61	8	22	3710	132	31	101	-	-	-	-	-	-	-	-	-	-	-
9	14	61	9	26	4380	98	30	68	-	-	-	-	-	-	-	-	-	-	-
9	14	61		*	18590	129	26	103	2	7	8	2	1	5	0	2	2	1	4

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NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE	MICHIGAN
MAJOR BASIN	WESTERN GREAT LAKES
MINOR BASIN	ST. CLAIR-DETROIT RIVERS
STATION LOCATION	DETROIT RIVER AT
	DETROIT, MICHIGAN 15

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	4	60	16.1	8.8	8.1	.3	4	.3	1.5	.0	6	80	100	0	20	12	.0	124	30
10	11	60	15.6	8.8	8.1	.2	6	.4	1.2	.0	6	80	97	0	20	14	.0	122	56
10	18	60	16.1	9.1	8.0	.8	5	.4	1.3	.0	6	78	99	0	20	14	.0	112	-
10	18	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54
10	26	60	10.0	10.2	8.0	.8	5	.4	1.5	.0	6	84	103	0	100	13	.0	136	220
11	1	60	11.1	10.0	8.0	.6	5	.3	-	.0	6	79	98	0	35	13	.0	138	85
11	8	60	7.2	11.2	8.1	.8	5	.4	1.6	.0	8	83	100	0	70	12	.0	146	73
11	15	60	6.7	11.4	7.8	.8	4	.5	1.4	.0	7	80	97	0	25	13	.0	126	20
11	23	60	7.2	11.0	8.0	-	3	.8	-	.0	7	79	97	0	20	7	.0	140	-
11	29	60	7.8	11.0	8.2	.7	3	.5	1.2	.0	7	78	96	0	35	13	.0	124	86
12	6	60	4.4	12.2	8.0	-	4	.3	1.1	.0	6	79	96	0	20	12	.0	134	230
12	12	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
12	13	60	.6	13.3	8.1	.5	5	.8	1.0	.0	6	80	97	0	60	12	.0	122	-
12	21	60	.6	-	8.1	.9	4	.1	.6	.0	6	80	98	0	15	14	.0	134	-
12	27	60	.6	13.9	8.1	.8	3	.2	1.0	.0	6	79	98	0	4	12	.0	136	*1
1	3	61	.6	13.5	8.1	-	4	.2	-	.0	8	79	100	0	7	13	.0	138	*3
1	11	61	.6	13.9	8.1	-	37	.4	.9	.0	8	78	95	0	3	12	.0	113	14
1	18	61	.6	12.8	8.2	.5	8	.4	1.2	.1	10	78	95	0	4	14	.0	111	*1
1	23	61	.5	14.4	8.1	.6	-	.3	.7	.0	8	77	95	0	3	12	.0	116	*1
1	31	61	.5	14.5	8.2	.6	10	.1	.5	.0	7	80	97	0	2	12	.0	123	-
2	7	61	.6	14.2	8.2	.9	13	.3	.7	.0	7	80	96	0	2	15	.0	124	-
2	15	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*1
2	20	61	.6	14.1	8.1	.7	10	.4	-	.0	7	80	97	0	2	14	.0	112	2
2	28	61	.6	13.8	8.1	.2	9	.6	1.2	.0	12	78	95	0	20	14	.0	119	3
3	8	61	.7	13.8	8.1	.7	19	.7	1.0	.0	8	77	94	0	15	14	.0	128	*1
3	15	61	1.7	13.5	8.2	.1	17	.5	1.3	.0	7	84	100	0	50	16	.0	126	*25
3	21	61	1.8	14.0	8.3	1.2	10	1.0	1.4	.0	8	86	102	0	55	16	.0	122	-
3	28	61	2.6	13.8	8.1	.8	3	.3	1.0	.0	7	79	96	0	15	15	.0	117	-
4	4	61	3.3	13.5	8.1	.5	13	.4	.9	.0	8	80	96	0	25	14	.0	117	-
4	11	61	3.3	13.0	8.1	1.1	6	-	-	.0	7	80	97	0	15	14	.0	112	-
4	18	61	3.9	12.0	8.1	.1	11	.5	1.0	.0	7	79	95	0	45	14	.0	119	-
4	25	61	6.7	12.4	8.1	.2	10	.4	1.0	.0	6	80	96	0	40	14	.0	120	-
5	2	61	7.0	12.0	8.2	.2	10	1.0	1.9	.0	7	81	99	0	25	16	.0	122	-
5	9	61	8.9	11.5	8.2	.6	101	-	-	.0	7	80	96	0	15	16	.0	126	-
5	16	61	12.9	10.9	8.2	.3	9	.8	1.5	.0	8	80	99	0	17	16	.0	122	*1
5	23	61	11.2	11.4	8.2	.5	9	.5	.9	.0	8	80	99	0	10	15	.1	126	-
5	30	61	12.0	11.2	8.4	.7	5	.4	1.1	.0	8	81	99	0	10	15	.0	120	110
6	13	61	17.8	10.5	-	1.3	10	.6	1.5	.0	8	80	96	0	8	15	.1	122	-
6	20	61	17.3	9.1	8.3	.5	14	.7	1.7	.0	8	80	98	0	15	14	.0	130	4

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MICHIGAN

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN ST. CLAIR-DETROIT RIVERS

STATION LOCATION DETROIT RIVER AT

DETROIT, MICHIGAN 15

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
6	27	61	16.7	9.5	8.3	.6	12	.9	2.1	.0	9	83	100	0	35	15	.0	128	3
7	11	61	19.8	11.2	8.3	.6	8	.5	1.6	.0	7	80	97	0	20	15	.0	122	8
7	18	61	20.9	8.8	8.2	.4	8	.7	1.5	.0	7	81	96	0	30	15	.0	123	*3
7	25	61	23.0	8.6	8.3	.7	10	.4	1.4	.0	8	80	76	0	20	14	.0	133	10
8	1	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
8	8	61	24.0	8.3	8.4	.1	9	.6	1.4	.0	8	80	95	0	35	15	.0	129	-
8	15	61	23.9	8.5	8.4	.3	9	.5	1.4	.0	7	81	96	0	35	15	.0	126	30
8	22	61	21.1	8.4	8.4	.2	8	.7	1.0	.0	7	81	95	0	25	15	.0	134	*3
8	29	61	22.2	8.3	8.3	.3	9	.6	1.1	.0	7	80	95	0	20	15	.0	130	33
9	6	61	23.9	8.0	8.2	-	9	.8	1.6	.0	8	80	96	0	20	15	.0	135	3
9	11	61	23.8	8.3	8.4	.4	9	.5	1.8	.0	7	82	96	0	20	15	.0	118	*33
9	19	61	20.7	8.8	8.2	.4	9	.7	2.0	.0	7	84	96	0	25	14	.1	138	20
9	26	61	19.2	8.6	8.2	.5	8	.6	1.7	.0	7	81	96	0	70	14	.0	123	40

MEAN MONTHLY FLOW - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Supplied by U.S. Army Corps of Engineers
U.S. Lake Survey

STATE Michigan

MAJOR BASIN Western Great Lakes

MINOR BASIN St. Clair-Detroit Rivers

STATION LOCATION Detroit River at Detroit, Michigan

October	November	December	January	February	March	April	May	June	July	August	September
201.000	195.000	200.000	175.000	181.000	187.000	188.000	188.000	187.000	189.000	190.000	187.000

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE MICHIGAN
MAJOR BASIN WESTERN GREAT LAKES
MINOR BASIN ST. CLAIR-DETROIT RIVERS
STATION LOCATION ST. CLAIR RIVER AT
PORT HURON, MICHIGAN 64

DATE SAMPLE TAKEN			DATE OF DETERMI-NATION		RADIOACTIVITY IN WATER						RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
					ALPHA			BETA			DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	OTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	3	60	10	17	0	1	1	2	0	2							
10	10	60	10	20	0	1	1	0	0	0							
10	17	60	11	7	0	1	1	0	0	0							
10	24	60	11	14	0	3	3	0	0	0							
10	31	60	11	9	0	1	1	0	0	0							
11	7	60	11	25	0	0	0	0	0	0							
11	14	60	11	28	0	1	1	0	0	0							
11	21	60	12	1	0	2	2	0	0	0							
11	28	60	12	12	0	1	1	0	0	0							
12	5	60	12	29	0	0	0	0	0	0							
12	12	60	1	6	0	0	0	0	0	0							
12	19	60	1	6	0	0	0	0	0	0							
12	27	60	1	16	0	1	1	0	0	0							
1	3	61	1	18	0	0	0	0	0	0							
1	9	61	1	24	0	1	1	2	0	2							
1	16	61	2	6	0	0	0	0	0	0							
1	23	61	2	7	0	1	1	0	0	0							
1	30	61	2	14	0	0	0	0	0	0							
2	6	61	2	20	0	0	0	0	0	0							
2	13	61	3	6	0	0	0	0	0	0							
2	20	61	3	8	0	0	0	0	0	0							
2	27	61	3	13	0	0	0	0	0	0							
3	6	61	3	24	0	0	0	0	0	0							
3	13	61	3	31	0	0	0	0	0	0							
3	20	61	4	4	0	0	0	0	0	0							
3	27	61	4	17	0	0	0	0	0	0							
4	3	61	4	19	0	0	0	0	0	0							
4	10	61	5	5	0	0	0	0	0	0							
4	17	61	5	10	0	0	0	0	0	0							
4	24	61	5	24	0	0	0	0	4	4							
5	1	61	5	16	0	0	0	0	0	0							
5	8	61	5	26	0	0	0	0	0	0							
5	15	61	5	31	0	0	0	0	0	0							
5	22	61	6	14	0	0	0	0	0	0							
5	29	61	6	15	0	0	0	0	0	0							
6	5	61	7	10	0	0	0	0	0	0							
6	9	61	6	29	0	0	0	0	0	0							
6	19	61	7	27	0	0	0	0	0	0							
6	26	61	7	31	0	0	0	0	0	0							
7	31	61*	8	11	0	0	0	0	0	0							

WATER QUALITY BASIC DATA

STATE MICHIGAN

MAJOR BASIN WESTERN GREAT LAKES

RADIOACTIVITY DETERMINATIONS

MINOR BASIN ST. CLAIR-DETROIT RIVERS

STATION LOCATION ST. CLAIR RIVER AT

PORT HURON, MICHIGAN 64

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
8	28	61*	9	19	0	0	0	7	9	16								
9	7	61	10	2	-	-	-	2	0	2								
9	11	61	10	5	-	-	-	5	1	6								
9	18	61	10	18	-	-	-	1	6	7								
9	25	61	10	5	0	0	0	7	7	14								

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE MICHIGAN

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN ST. CLAIR-DETROIT RIVERS

STATION LOCATION ST. CLAIR RIVER AT PORT HURON, MICHIGAN

64

DATE OF SAMPLE: MONTH	DAY	YEAR	ALGAE (Number per ml.): TOTAL	BLUE-GREEN: COCCOID	BLUE-GREEN: FILAMENTOUS	GREEN: COCCOID	GREEN: FILAMENTOUS	FLAGELLATES (Pigmented): GREEN	FLAGELLATES (Pigmented): OTHER	DIATOMS: CENTRIC	DIATOMS: PENNATE	INERT DIATOM SHELLS (No. per ml.): CENTRIC	INERT DIATOM SHELLS: PENNATE	DIATOMS, DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*): FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE	OTHER MICROPLANKTON, FUNGI AND BACTERIA (No. per ml.)	MICROINVERTEBRATES: PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	DOMINANT GENERA (See Introduction for Identification)
10	3	60	100	70		20					50	70	70	46	70	48	10	2	10			10	70	10		4			-----
10	17	60	300	50						160	70	40	70	25	30	47	20	46	10	48	10	40	70		2	8			4----
11	7	60	700			90		20		110	470	50	110	46	40	48	20	25	10	6	10	30	20	10					----6
11	21	60												25	20	47	20	30	20	95	10	30	20		7	7			-----
12	5	60	200	20		20				90	20	70	90	47	20	30	20	25	10	46	10	50	20		2	2			-----
12	19	60	400			40				90	200	40		46	30	95	10	47	10	35	10	40			6	4			-----
1	3	61	300			20	20			20	200	160	220	45	20	47	20	46	10	95	10	40	270	30	4	7			-----
1	16	61	400			110				70	270	220	310	45	20	48	10	46	10	36	10	40	70		2	7			-----
2	6	61	200								160		70	47	40	45	10	35	10	60	10	40		10	2				-----
2	20	61	200								160		180	47	30	95	20	45	20	35	10	20			2	4			-----
3	6	61	500					20	70	50	400	200	290	46	20	48	20	47	10	95	10	40	70	10	8	5			----6
3	20	61	1400			130			20	290	930	290	580	46	20	95	10	45	10	35	10	50		10					--946
4	3	61	900			20		50	70	130	670	130	740	95	30	47	20	46	10	48	10	40	70	30	19	5			3----
4	17	61	400			40			150	60	190	100	310	95	40	47	20	46	10	89	10	20		20	9				-----
5	1	61	200							80	150	60	100	95	30	47	30	60	10	62	10	30			6	7			-----
5	15	61	300						20		270		160	95	40	47	20	60	10	92	10	20	20		13	18			7----
6	5	61	700							170	500	40	120	95	40	47	20	45	10	35	10	30			34	23			-----
6	19	61	200						20	60	150			95	80	47	10	45	*	58	*	10			268	36			-----
7	3	61	600	20		20		40	80	290	230	150	80	95	40	47	20	25	10	24	10	30			26	4			4----
7	17	61	200			20		20		80	40	40	60	47	30	30	20	95	20	25	10	30			62	36			-----
8	8	61	900			80				460	330	150	80	25	40	24	20	47	20	56	*	10			19	3		1	4----
8	22	61	900	40		100		40		250	500	80	120	46	20	48	20	56	10	25	10	40		10	50	29			4--6-
9	7	61				20								47	30	25	20	95	10	46	10	30			86	14			-----
9	18	61	400			60		20	100	170	20	40		47	60	25	10	46	10	95	10	20	100		51	16			4----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER

(Parts per billion)

STATE MICHIGAN

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN ST. CLAIR-DETROIT RIVERS

STATION LOCATION ST. CLAIR RIVER AT PORT HURON, MICHIGAN

64

DATE OF SAMPLE						EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY	GALLONS FILTERED	TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	14	60	10	28	5093	162	28	134	3	8	6	0	1	5	0	2	2	0	7
10	28	60	11	11	4973	152	16	136	1	5	5	1	0	4	0	1	1	0	3
11	11	60	12	6	5550	156	36	120	3	10	9	1	1	7	0	3	2	1	8
1	6	61	1	20	5040	115	26	89	2	7	7	1	1	5	0	3	2	0	5
2	3	61	2	17	4680	167	43	124	5	11	8	1	0	7	0	5	4	0	10
6	5	61	7	25	4855	151	47	104	0	14	18	2	1	13	2	6	2	1	6
8	7	61	8	25	3480	170	42	128	1	12	19	4	2	13	0	3	2	1	4
9	11	61	9	28	4720	141	20	121	0	5	10	3	1	6	0	2	1	1	1

NATIONAL WATER QUALITY NETWORK

STATE MICHIGAN

MAJOR BASIN WESTERN GREAT LAKES

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

MINOR BASIN ST. CLAIR-DETROIT RIVERS

STATION LOCATION ST. CLAIR RIVER AT PORT HURON, MICHIGAN 64

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	3	60	15.0	10.1	8.5	.3	-	-	-	.1	7	89	102	4	-	-	-	-	16
10	10	60	17.0	10.4	8.5	.6	-	-	-	.1	8	90	102	3	-	-	-	-	19
10	17	60	16.0	10.4	8.5	.5	-	-	-	.1	7	92	102	3	-	-	-	-	4
10	24	60	12.5	11.0	8.5	.5	-	-	-	.1	6	98	106	0	-	-	-	-	44
10	31	60	13.0	11.1	8.6	.6	-	-	-	.1	7	96	104	2	-	-	-	-	150
11	7	60	9.0	11.9	8.0	.8	-	-	-	.1	6	92	102	6	-	-	-	-	29
11	14	60	10.0	11.6	8.6	.8	-	-	-	.1	6	94	106	0	-	-	-	-	4
11	21	60	9.0	12.2	8.4	.4	-	-	-	.1	6	98	100	3	-	-	-	-	*30
11	28	60	10.0	12.4	8.3	.9	-	-	-	.1	7	96	102	5	-	-	-	-	9
12	5	60	7.0	12.8	7.7	.6	-	-	-	.1	7	110	102	3	-	-	-	-	*4
12	12	60	4.0	13.4	8.1	1.0	-	-	-	.1	6	110	102	15	-	-	-	-	*1
12	19	60	3.0	14.5	8.0	1.7	-	-	-	.1	7	88	108	5	-	-	-	-	*8
12	27	60	1.0	15.0	8.0	1.5	-	-	-	.1	10	88	104	8	-	-	-	-	42
1	3	61	2.0	15.6	8.1	1.6	-	-	-	.1	7	86	112	0	-	-	-	-	-
1	9	61	1.0	13.8	7.7	1.8	-	-	-	.1	7	84	106	5	-	-	-	-	41
1	16	61	1.0	14.0	8.0	2.0	-	-	-	.1	7	82	106	5	-	-	-	-	*100
1	23	61	1.0	14.1	7.6	2.1	-	-	-	.1	8	82	104	3	-	-	-	-	170
1	30	61	1.0	14.4	8.0	2.0	-	-	-	.1	8	80	110	0	-	-	-	-	870
2	6	61	2.0	14.0	8.2	2.4	-	-	-	-	8	80	108	0	-	-	-	-	-
2	13	61	2.0	14.0	8.2	2.0	-	-	-	.1	8	84	106	0	-	-	-	-	*8
2	20	61	2.0	14.2	8.0	2.2	-	-	-	.1	9	84	108	0	-	-	-	-	-
2	27	61	2.0	13.6	8.0	2.1	-	-	-	.1	8	84	106	5	-	-	-	-	58
3	6	61	3.0	13.7	7.7	1.9	-	-	-	.1	7	84	108	5	-	-	-	-	*10
3	13	61	3.0	13.7	8.1	1.9	-	-	-	.1	7	84	112	5	-	-	-	-	260
3	20	61	3.0	13.8	8.0	1.4	-	-	-	.1	6	82	104	20	-	-	-	-	8
3	27	61	4.0	13.6	7.9	.7	-	-	-	.7	6	86	108	0	-	-	-	120	-
4	3	61	3.0	13.6	8.1	1.0	-	-	-	.1	6	86	106	0	-	-	-	125	2400
4	10	61	3.0	13.6	8.0	.8	-	-	-	.1	6	84	102	0	-	-	-	125	580
4	17	61	4.0	13.1	8.2	.4	-	-	-	.1	6	84	106	0	-	-	-	143	770
4	24	61	5.0	12.8	7.9	-	-	-	-	.1	6	84	108	0	-	-	-	117	710
5	1	61	5.0	13.1	8.1	.7	-	-	-	.1	6	82	110	0	-	-	-	140	390
5	8	61	8.0	12.9	8.2	.6	-	-	-	.1	7	80	110	0	-	-	-	137	570
5	15	61	9.0	12.3	8.3	.8	-	-	-	.1	7	80	104	0	-	-	-	140	380
5	22	61	10.5	11.7	8.2	-	-	-	-	.1	8	82	105	0	-	-	-	136	-
5	29	61	11.0	11.5	8.4	.5	-	-	-	.1	8	82	104	0	-	-	-	-	920
6	5	61	13.0	10.9	8.5	.5	-	-	-	.1	9	82	102	0	0	-	-	116	8100
6	19	61	14.5	10.2	8.1	.5	-	-	-	.1	10	82	104	0	0	-	-	105	50
6	26	61	15.0	10.4	8.0	.5	-	-	-	.1	7	84	102	0	0	-	-	100	2
7	3	61	17.0	9.9	8.0	.3	-	-	-	.1	7	84	102	0	0	-	-	100	13

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MICHIGAN

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN ST. CLAIR-DETROIT RIVERS

STATION LOCATION ST. CLAIR RIVER AT PORT HURON, MICHIGAN

64

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	10	61	18.0	9.9	8.1	.4	-	-	-	.1	6	84	104	0	0	-	-	116	10
7	17	61	19.5	9.5	8.1	.4	-	-	-	.1	7	82	104	0	0	-	-	116	8
7	24	61	20.0	8.9	8.0	1.0	-	-	-	.1	6	84	102	0	0	-	-	116	20
7	31	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
8	7	61	21.0	8.0	8.0	.2	-	-	-	.1	7	84	102	0	0	-	-	116	-
8	8	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
8	22	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
8	29	61	21.0	7.8	8.0	-	-	-	-	.1	7	82	102	0	0	21	-	115	-
9	11	61	22.5	8.1	8.2	-	-	-	-	.1	7	86	100	0	0	17	-	132	23
9	18	61	19.0	9.2	8.0	.3	-	-	-	.1	6	82	88	0	0	11	.0	106	13
9	25	61	20.0	8.8	8.0	.1	-	-	-	.1	6	80	96	0	0	11	-	116	-

MEAN MONTHLY FLOW - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Supplied by U.S. Army Corps of Engineers
U.S. Lake Survey

STATE Michigan

MAJOR BASIN Western Great Lakes

MINOR BASIN St. Clair-Detroit Rivers

STATION LOCATION St. Clair River at Port Huron, Michigan

October	November	December	January	February	March	April	May	June	July	August	September
200.000	191.000	193.000	171.000	180.000	181.000	181.000	182.000	184.000	185.000	186.000	185.000

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE INDIANA

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN ST. JOSEPH RIVER

STATION LOCATION LAKE MICHIGAN AT GARY, INDIANA

17

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	25	60*	11	3	0	3	3	0	4	4								
11	29	60*	12	6	0	1	1	0	0	0								
12	27	60*	1	19	0	0	0	0	0	0								
1	31	61*	2	20	0	0	0	0	0	0								
2	14	61*	3	22	0	0	0	0	1	1								
3	28	61*	4	6	0	0	0	0	0	0								
4	25	61*	5	5	0	0	0	0	0	0								
5	23	61*	6	23	0	0	0	0	0	0								
6	20	61*	7	21	0	0	0	0	0	0								
8	1	61*	8	28	0	0	0	0	1	1								
8	29	61*	9	13	0	0	0	1	1	2								
9	5	61	9	28	-	-	-	0	2	2								
9	12	61	10	10	0	0	0	0	0	0								
9	18	61	10	20	0	0	0	2	12	14								

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE INDIANA

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN ST. JOSEPH RIVER

STATION LOCATION LAKE MICHIGAN AT GARY, INDIANA

17

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	5	60	700	20		70			50	340	250	130	340	95	30	47	30	49	10	82	10	30	130		2				-----
10	25	60	700			20				90	580	160	1030	95	50	47	10	49	*	60	*	30	50		5	1			---86
11	15	60	1600	50	50			20		200	1230	260	1540	95	50	47	10	9	10	25	*	30	150	30		2			34-86
11	22	60	1000						20	70	860		90	95	50	47	20	9	10	56	10	20	70		3	2			3--86
12	6	60	1100			20				110	940	160	200	95	70	9	10	47	10	35	10	10		10	1	3			3--8-
1	4	61	1000	20		20			20	290	630	160	450	95	40	47	10	97	10	9	10	40	70	10	9				3----
1	17	61	1800	20						110	1650	200	380	95	30	97	20	47	10	35	10	30		10		2			3--86
2	7	61	1500					20		1140	340	160	70	97	40	82	20	60	20	95	10	20	20		3				--9-7
2	21	61	1900	20						1720	130	340	220	82	30	60	20	97	20	95	10	30			8				--9-7
3	7	61	1700						70	860	720	510	980	60	20	97	20	47	20	82	20	30	50		10	3			3-9-7
3	21	61	4400							4090	310	890	450	82	50	97	30	60	10	47	*	20			2				3-9-7
4	4	61	10200			70				9650	470	3820	740	82	30	60	30	97	10	95	10	20	90		20				3-9-7
4	18	61	3700			20			20	2990	630	2500	1250	60	20	80	20	82	10	95	10	40			31	4			--977
5	2	61	4000							3540	460	1280	190	82	30	60	30	47	20	49	10	20			45	2			--977
5	16	61	2000		20	20		20	80	910	910	290	230	47	40	95	20	82	10	92	10	20	230	10	83	3			--96-
6	6	61	1700		20	20		80		580	1010	290	120	95	60	47	20	92	10	60	10	10	40		7				--97-
6	20	61	1100						20	250	850	160	220	95	90	47	*	96	*	92	*	*			35				7--8-
7	18	61	1800	20	20	60		40	120	370	1180	170	80	95	90	96	10	89	*	47	*	10		10	32	7	2		74-8-
8	1	61	1800			40		20		330	1410		150	95	80	47	10	96	10	25	*	10		10	77	49			3--8-
8	15	61	500			230				40	190	20	60	95	60	47	20	24	10	96	*	10	20		25	4	2		-----
9	5	61	400			40		20	20	150	190	60	20	95	50	47	20	24	10	25	10	10	20		32	4			-----
9	18	61	300	60				20		60	190	40	40	95	60	47	10	56	10	25	10	20			25	2			-----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE INDIANA

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN ST. JOSEPH RIVER

STATION LOCATION LAKE MICHIGAN AT GARY, INDIANA

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	3	60	10	13	5300	143	28	115	1	7	10	1	1	7	1	3	1	1	5
11	7	60	11	18	5490	124	32	92	2	9	9	1	1	7	0	4	2	1	5
12	6	60	12	13	3360	159	35	124	1	9	14	2	2	9	1	4	1	1	5
1	4	61	1	11	4620	133	22	111	1	5	10	2	1	7	0	2	1	1	2
2	7	61	2	17	5010	144	38	106	1	8	17	3	3	10	1	5	1	1	5
3	7	61	3	13	1400	309	57	252	1	14	26	7	4	15	0	6	2	1	7
4	4	61	4	13	5000	110	33	77	-	-	-	-	-	-	-	-	-	-	-
5	2	61	5	11	5330	118	41	77	-	-	-	-	-	-	-	-	-	-	-
6	6	61	6	13	4870	116	34	82	-	-	-	-	-	-	-	-	-	-	-
6	6	61		*	15200	116	37	79	1	10	12	3	1	8	0	5	2	1	6
7	5	61	7	13	5000	123	38	85	-	-	-	-	-	-	-	-	-	-	-
8	1	61	8	9	5450	119	36	83	-	-	-	-	-	-	-	-	-	-	-
9	5	61	9	12	5040	105	20	85	-	-	-	-	-	-	-	-	-	-	-
9	5	61		*	15490	115	31	84	3	8	9	2	1	6	0	3	2	0	6

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE INDIANA

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN ST. JOSEPH RIVER

STATION LOCATION LAKE MICHIGAN AT GARY, INDIANA

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	5	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
10	18	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42
10	25	60	13.7	9.2	8.4	2.2	-	.9	2.5	-	7	113	124	20	15	-	-	-	560
11	1	60	13.4	8.5	8.1	2.1	-	.6	1.9	-	7	112	125	5	3	-	-	-	11
11	9	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1500
11	15	60	10.1	9.4	8.3	1.2	-	.4	1.7	-	6	113	126	5	3	-	-	-	30
11	18	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42
11	22	60	9.5	8.9	8.3	1.2	-	.9	4.1	-	7	107	153	5	1	-	-	-	20
11	29	60	9.1	8.3	8.5	1.5	-	.4	1.7	-	7	110	152	5	3	-	-	-	-
12	6	60	6.9	9.5	8.3	1.1	-	.8	1.8	-	7	106	133	10	9	-	-	-	32
12	13	60	3.5	10.5	8.3	3.0	-	.9	2.0	-	7	110	142	20	28	-	-	-	*2
12	27	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
1	4	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
1	10	61	1.6	10.0	8.3	3.2	-	.8	1.8	-	7	114	148	5	10	-	-	-	24
1	17	61	2.8	9.4	8.2	2.4	-	1.0	1.7	-	-	110	144	0	9	-	-	-	*2
1	25	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
1	31	61	1.5	14.5	8.5	1.2	10	1.2	1.4	-	-	110	147	5	10	-	-	-	*2
2	7	61	1.5	14.5	8.2	.6	18	2.9	4.6	-	6	112	151	5	7	26	-	-	32
2	14	61	2.5	13.8	8.2	1.0	12	1.2	2.4	.2	12	111	150	15	7	27	-	180	20
2	21	61	3.1	14.1	8.5	1.9	15	1.6	3.0	-	6	110	149	0	8	27	-	164	44
2	28	61	2.6	13.1	8.4	1.9	13	1.1	2.0	.1	8	108	149	5	15	22	.0	194	*2
3	7	61	3.8	13.2	8.4	.5	12	.5	2.3	.0	10	105	148	5	7	5	.0	152	45
3	14	61	3.8	13.1	8.4	1.3	13	.7	2.2	.0	10	107	140	15	42	20	.0	162	48
3	21	61	4.2	13.1	8.4	1.3	17	.8	2.6	.0	7	103	140	5	25	22	.0	141	140
3	28	61	4.5	13.0	8.3	.9	12	.5	2.4	.0	9	101	136	5	9	16	-	127	2
4	4	61	5.5	13.4	8.4	2.7	15	1.0	3.1	.0	10	114	140	5	20	24	.0	155	560
4	11	61	5.6	12.8	8.4	1.8	16	.5	2.3	.0	10	114	140	20	31	25	.0	147	82
4	18	61	4.9	12.6	8.3	1.1	13	.6	-	.0	7	123	140	20	47	25	.0	153	48
4	25	61	6.9	12.2	8.2	1.3	16	.8	2.7	.0	7	122	136	10	22	22	.0	154	48
5	2	61	8.2	12.6	8.7	1.7	14	.9	3.5	.0	10	124	140	10	15	22	.0	-	66
5	9	61	9.7	11.8	8.4	-	14	1.0	2.7	.0	10	116	148	5	7	22	.0	157	2
5	16	61	9.7	12.1	8.3	1.1	14	.4	2.6	.0	10	114	148	0	5	18	-	-	4
5	22	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
5	23	61	11.8	10.6	8.1	1.3	13	.7	2.3	.0	8	116	140	5	12	22	.0	156	-
6	6	61	11.8	10.2	8.5	2.0	18	.5	2.2	.0	7	121	148	0	7	24	-	155	120
6	14	61	15.3	8.5	7.6	1.0	13	1.0	1.5	.0	7	106	148	5	15	-	-	-	60
6	20	61	15.3	9.5	8.2	1.2	13	1.1	2.8	.0	7	125	148	0	5	24	.0	156	340

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE INDIANA

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN ST. JOSEPH RIVER

STATION LOCATION LAKE MICHIGAN AT GARY, INDIANA

17

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	11	61	19.0	8.4	8.4	1.2	10	1.0	2.7	.0	7	122	144	0	6	18	.0	180	15
7	18	61	15.6	8.4	8.1	1.6	10	1.2	2.8	.0	5	123	148	10	5	22	.0	180	18
7	25	61	13.5	8.8	7.9	1.6	11	.6	2.2	.0	10	115	144	0	5	29	.0	169	93
8	1	61	12.9	9.6	8.1	1.8	16	.9	2.2	.0	9	116	144	5	4	26	.0	175	60
8	8	61	22.1	7.7	8.3	.5	19	.9	2.2	.0	4	112	144	0	1	26	.0	166	44
8	15	61	21.3	7.7	8.1	.8	13	.7	2.7	.0	10	114	148	0	0	32	.0	153	46
8	22	61	21.2	7.2	8.2	.4	13	1.0	2.0	.0	10	116	148	0	1	28	.0	150	180
8	29	61	22.6	7.0	8.2	.4	16	1.0	2.4	.0	10	113	132	0	3	19	.0	149	52
9	5	61	17.1	7.6	7.7	.1	-	1.0	2.4	.0	9	116	132	0	1	16	.0	170	130
9	12	61	11.8	7.9	7.8	1.3	12	.9	2.2	.0	8	116	140	0	5	23	.0	189	34
9	19	61	15.6	7.6	8.0	1.0	13	1.2	2.3	.0	10	110	140	5	4	20	.0	167	260
9	26	61	17.8	8.0	7.9	.2	-	.9	-	.0	8	112	128	10	22	25	.0	144	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Supplied by U.S. Army Corps of Engineers
U.S. Lake Survey

STATE Indiana

MAJOR BASIN Western Great Lakes

MINOR BASIN St. Joseph River

STATION LOCATION Lake Michigan at Gary, Indiana

October	November	December	January	February	March	April	May	June	July	August	September

FLOW DATA NOT APPLICABLE --- LAKE LEVELS ONLY

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE WISCONSIN

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN LAKE MICHIGAN, WESTERN SHORE

STATION LOCATION LAKE MICHIGAN AT MILWAUKEE, WISCONSIN 65

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA			DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	3	60	10	19	1	1	2	0	1	1							
10	10	60	10	19	0	0	0	0	0	0							
10	17	60	10	31	0	0	0	0	0	0							
10	24	60	11	2	0	1	1	0	0	0							
10	31	60	11	18	0	0	0	0	0	0							
11	7	60	2	6	0	2	2	0	29	29							
11	14	60	11	28	0	2	2	0	0	0							
11	21	60	11	30	0	1	1	0	0	0							
11	28	60	12	6	0	1	1	0	1	1							
12	5	60	1	5	0	1	1	0	0	0							
12	12	60	1	3	0	0	0	0	1	1							
12	17	60	1	12	0	1	1	0	0	0							
1	3	61	1	18	0	0	0	0	0	0							
1	9	61	1	20	0	2	2	0	0	0							
1	16	61	2	1	0	1	1	0	0	0							
1	23	61	2	6	0	1	1	0	0	0							
1	30	61	2	16	0	0	0	0	0	0							
2	6	61	2	16	0	0	0	0	0	0							
2	14	61	3	2	0	0	0	0	0	0							
2	20	61	3	6	0	1	1	0	0	0							
2	27	61	3	16	0	1	1	0	0	0							
3	6	61	3	17	0	0	0	0	0	0							
3	13	61	3	29	1	0	1	0	0	0							
3	20	61	4	3	0	1	1	0	0	0							
3	27	61	4	24	0	0	0	0	0	0							
4	3	61	4	19	0	0	0	10	13	23							
4	10	61	5	3	0	0	0	0	0	0							
4	17	61	5	2	0	0	0	0	0	0							
4	24	61	5	10	0	0	0	0	0	0							
5	1	61	5	16	0	1	1	0	0	0							
5	8	61	5	25	0	0	0	0	0	0							
5	15	61	5	31	0	0	0	0	1	1							
5	22	61	6	8	0	0	0	0	0	0							
5	29	61	6	15	0	0	0	0	0	0							

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE WISCONSIN

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN LAKE MICHIGAN- WESTERN SHORE

STATION LOCATION LAKE MICHIGAN AT

MILWAUKEE, WISCONSIN 65

DATE SAMPLE TAKEN			DATE OF DETERMINATION		RADIOACTIVITY IN WATER						RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
					ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	µµc/l	µµc/l	µµc/l	µµc/l	µµc/l	µµc/l	MO.	DAY	µµc/g	µµc/g	µµc/l	µµc/l	µµc/l
6	5	61	6	20	0	0	0	0	0	0							
6	12	61	7	25	0	1	1	0	0	0							
6	19	61	6	30	1	1	2	0	0	0							
6	26	61	7	26	0	0	0	0	0	0							
7	31	61*	8	10	0	0	0	0	0	0							
8	28	61*	9	18	0	0	0	2	4	6							
9	5	61	9	29	-	-	-	1	5	6							
9	11	61	10	3	-	-	-	0	0	0							
9	18	61	10	16	0	0	0	2	1	3							
9	25	61	10	2	-	-	-	0	0	0							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE WISCONSIN
MAJOR BASIN WESTERN GREAT LAKES
MINOR BASIN LAKE MICHIGAN, WESTERN SHORE
STATION LOCATION LAKE MICHIGAN AT MILWAUKEE, WISCONSIN 65

DATE OF SAMPLE: MONTH	DAY	YEAR	ALGAE (Number per ml.): TOTAL	BLUE-GREEN: COCCOID	BLUE-GREEN: FILAMENTOUS	GREEN: COCCOID	GREEN: FILAMENTOUS	FLAGELLATES (Pigmented): GREEN	FLAGELLATES (Pigmented): OTHER	DIATOMS: CENTRIC	DIATOMS: PENNATE	INERT DIATOM SHELLS (No. per ml.): CENTRIC	INERT DIATOM SHELLS: PENNATE	DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*): FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE	OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES: PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	DOMINANT GENERA (See Introduction for Identification)
10	2	60	4400			50		50	50	4050	240	2000		82	90	49	*	95	*	48	*	10	40	10	17	3			--9--
11	7	60	300	50					20	20	160	50	70	35	20	95	10	80	10	9	10	50	20		7	1			-----
12	5	60	300						20	50	250	90	50	47	20	80	10	95	10	45	10	50			1	2			-----
12	19	60	400					70		150	200	40	110	82	20	97	20	47	10	35	10	40	90		1				-----
1	3	61	300							110	180	70	160	60	30	82	10	45	10	97	10	50	20	20		1			-----
1	16	61	300							160	70		90	60	30	82	10	95	10	47	10	40				1			-----
2	6	61	400							200	180	160	180	60	20	47	20	82	10	80	10	50			5	3			--9--
2	20	61	200							70	160	20	50	60	60	47	10	95	10	83	*	20							-----
3	6	61	1900	20				20		1320	560	200	360	60	30	48	10	47	10	84	10	40	50	10	4	5			--9-6
3	20	61	2400	20						1870	530	360	360	60	40	89	10	82	10	9	10	40				7			4-97-
4	3	61	1400			20				1170	220	330	110	60	40	95	20	96	10	47	10	20	40	10	3	5			--9-7
4	17	61	1400			70			20	660	620	410	500	48	20	49	10	47	10	82	10	40			4	7	3	3	--9-6
5	1	61	800			40			60	270	480	250	150	47	40	60	20	95	20	92	10	10			6	5			--97-
5	15	61	1300			20				790	520	130	150	95	30	60	30	47	10	82	10	20			10	17			7-9--
6	5	61	2200			40			20	1350	790	170	230	82	30	95	30	47	10	96	*	30	20		3				7---7
6	19	61	1600		20	80		20	60	600	850	100	120	95	50	60	10	96	10	82	10	30	20		16	16	1		7498-
7	3	61	900						20	630	270	20	180	95	40	60	20	82	20	47	10	10	20		7	12			--97-
7	17	61	800		20				20	440	350	250	100	95	40	60	10	47	10	82	10	30		20	19	13			--97-
8	7	61	500						40	190	310	60	80	47	40	95	30	25	10	24	10	10			43	10			4----
8	21	61	400			150		20	20	120	60			47	50	95	20	25	20	29	10	10			125	31			-----
9	5	61	400	20	40	60		20		210	40	60	80	95	50	47	20	25	10	24	*	10		10	22	18			4----
9	25	61	1300			40		20		770	440	120	170	95	40	47	30	48	10	45	10	20	2860		59	7			----7

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE WISCONSIN

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN LAKE MICHIGAN-WESTERN SHORE

STATION LOCATION LAKE MICHIGAN AT MILWAUKEE, WISCONSIN 65

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	10	60	10	29	5414	178	33	145	1	10	8	1	1	6	0	3	2	1	8
11	15	60	11	28	5921	114	23	91	1	6	8	1	1	6	0	2	1	0	5
12	9	60	12	24	5242	145	19	126	1	5	6	1	1	4	0	2	1	0	4
1	17	61	1	27	5100	124	16	108	2	4	6	1	1	4	0	1	1	0	2
2	15	61	3	3	5157	181	32	149	2	7	7	0	0	7	0	2	2	1	11
3	20	61	4	5	5412	157	39	118	2	10	9	1	1	6	1	4	3	1	10
4	17	61	5	8	5102	178	44	134	3	12	12	3	1	8	0	4	3	1	9
5	23	61	6	13	4997	167	51	116	4	16	11	2	1	8	0	6	4	1	9
6	26	61	7	17	5119	198	44	154	4	13	13	5	1	6	1	4	1	1	8
7	31	61	8	10	5890	116	29	87	1	9	8	1	1	6	0	3	2	1	5
8	25	61	9	7	5223	122	31	92	2	9	7	1	1	5	0	2	2	1	8
9	26	61	10	20	5332	157	26	131	2	9	6	1	1	4	0	2	2	1	4

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE WISCONSIN
MAJOR BASIN WESTERN GREAT LAKES
MINOR BASIN LAKE MICHIGAN-WESTERN SHORE
STATION LOCATION LAKE MICHIGAN AT
MILWAUKEE, WISCONSIN 65

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	3	60	16.0	9.5	8.6	1.8	8	1.1	3.9	.1	7	111	135	0	4	22	.0	160	370
10	10	60	6.6	10.3	7.7	1.4	6	.8	1.6	.0	5	109	130	0	0	18	.0	165	13
10	17	60	6.5	10.9	7.8	.7	4	.4	.7	.0	5	109	131	0	1	17	.0	148	30
10	24	60	9.1	10.6	8.3	1.1	4	.7	2.0	.0	5	109	129	0	2	18	.0	149	74
10	31	60	6.6	10.4	8.0	1.2	4	.7	1.6	.0	5	109	132	0	2	18	.0	139	12
11	7	60	8.8	10.9	8.2	.9	4	.4	1.2	.0	0	106	129	0	1	18	.0	151	22
11	14	60	7.1	11.5	8.2	1.5	4	.6	2.3	.0	6	108	132	0	2	19	.0	131	30
11	21	60	6.8	11.5	8.4	1.1	4	1.4	2.9	.0	7	109	135	0	1	21	.0	160	1300
11	28	60	7.0	11.6	8.1	.8	4	.6	2.0	.0	6	108	132	0	2	18	.0	151	150
12	5	60	4.8	12.1	7.9	.6	3	.5	1.3	.0	5	107	130	0	1	18	.0	147	8
12	12	60	3.4	12.1	8.1	.4	4	.6	1.3	.0	5	106	132	0	3	19	.0	141	6
12	19	60	2.3	12.7	8.1	-	4	.5	1.2	.0	5	108	132	0	1	18	.0	146	3
1	3	61	1.2	13.4	8.0	1.0	3	.4	1.1	.0	5	108	130	0	1	18	.0	173	3
1	9	61	1.2	13.4	8.2	1.7	3	.7	1.4	.0	6	108	133	0	2	19	.0	154	2
1	16	61	1.5	13.4	8.1	1.3	3	.4	1.2	.0	6	109	132	0	1	17	.0	147	2
1	23	61	.3	13.6	8.1	.9	3	.5	1.2	.0	5	107	133	0	1	18	.0	153	*1
1	30	61	.3	13.6	8.0	.7	4	.5	1.0	.0	6	109	129	0	1	18	.0	154	*1
2	6	61	.6	13.5	7.8	.6	4	.4	1.3	.0	6	109	133	0	1	20	.0	158	2
2	14	61	.5	13.7	8.0	.9	5	.6	1.8	.1	5	112	131	1	0	19	.0	154	*6
2	20	61	1.0	13.6	8.3	.6	4	.5	1.3	.1	5	108	132	1	1	18	.0	156	2
2	27	61	1.0	13.4	8.1	.8	4	.5	1.4	.0	6	109	132	0	1	19	.0	142	3
3	6	61	1.2	13.5	8.1	1.0	6	.5	1.7	.0	6	110	131	0	1	20	.0	155	28
3	13	61	1.3	13.3	8.0	1.2	2	.7	1.6	.0	5	110	131	0	13	19	.0	152	67
3	20	61	1.3	13.6	7.9	1.1	3	.7	1.6	.0	5	107	132	0	7	20	.0	160	6
3	27	61	2.6	13.0	8.1	.9	2	1.2	4.1	.0	8	110	135	0	4	22	.0	151	380
4	3	61	2.2	13.6	7.9	1.1	4	.8	1.7	.0	5	108	132	0	3	20	.0	155	5
4	10	61	2.6	13.1	8.2	.8	6	.5	1.2	.0	6	107	132	0	5	19	.0	147	4
4	17	61	2.8	12.3	8.1	1.0	5	.6	2.7	.0	5	111	131	0	9	21	.0	143	9
4	24	61	5.0	12.8	8.1	1.1	6	.9	2.2	.0	7	113	131	0	3	22	.0	151	240
5	1	61	5.1	12.8	8.1	1.1	4	.7	1.9	.1	5	109	133	0	1	20	.0	153	15
5	8	61	5.2	12.3	8.2	1.1	5	.6	1.8	.1	6	110	134	0	2	18	.0	153	140
5	15	61	5.6	12.6	8.3	1.3	5	.9	2.0	.1	5	110	132	0	1	19	.0	146	93
5	22	61	7.2	12.2	7.4	1.4	2	.5	1.1	.1	5	111	129	0	1	18	.0	150	4
5	29	61	8.0	11.8	8.3	1.7	6	.6	2.2	.0	7	106	131	0	2	20	.0	152	130
6	5	61	8.0	11.9	8.3	1.3	2	.8	2.4	.0	5	106	131	1	1	20	.0	151	21
6	12	61	9.2	11.7	8.4	.6	-	.7	1.9	.0	5	106	131	0	1	19	.0	155	1
6	19	61	10.0	11.2	8.2	1.0	4	.6	2.2	.0	6	105	131	0	1	19	.0	152	8
6	26	61	10.0	11.4	8.2	1.2	4	.7	1.7	.0	6	105	130	0	0	19	.0	156	*2
7	3	61	7.8	11.4	7.9	1.2	5	.7	2.0	.0	6	105	132	0	0	19	.0	148	4

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE WISCONSIN

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN LAKE MICHIGAN-WESTERN SHORE

STATION LOCATION LAKE MICHIGAN AT MILWAUKEE, WISCONSIN 65

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	10	61	12.8	10.8	8.3	2.0	3	.7	2.0	.0	7	107	129	0	0	19	.0	162	1
7	17	61	6.5	11.4	8.3	.8	4	.8	2.1	.0	7	106	129	0	0	19	.0	152	11
7	24	61	5.6	13.1	8.3	1.1	6	.7	2.2	.1	6	107	130	0	0	18	.0	148	1
7	31	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*1
8	7	61	19.7	8.9	8.6	1.1	7	.8	1.8	.1	5	105	129	0	0	19	.0	149	1
8	14	61	17.8	9.6	8.4	1.0	5	.9	2.3	.0	7	107	131	0	0	18	.0	149	17
8	21	61	20.4	8.8	8.5	1.2	6	.4	1.9	.1	6	106	128	0	0	17	.0	148	*33
8	28	61	9.8	11.4	8.2	.9	9	.7	1.9	.1	6	106	131	0	1	18	.0	141	*33
9	4	61	7.1	11.0	8.0	1.6	12	.7	1.7	.1	7	107	132	0	0	19	.0	148	-
9	5	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
9	11	61	7.2	11.2	8.3	-	12	.4	1.8	.1	7	105	130	0	1	18	.0	151	33
9	18	61	15.2	9.6	8.5	1.6	11	.5	2.2	.1	7	103	128	0	1	18	.0	147	480
9	25	61	14.3	9.7	8.4	.9	9	.6	2.4	.1	7	104	130	0	0	17	.0	142	33

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Supplied by U.S. Army Corps of Engineers
U.S. Lake Survey

STATE Wisconsin

MAJOR BASIN Western Great Lakes

MINOR BASIN Lake Michigan-Western Shore

STATION LOCATION Lake Michigan at Milwaukee, Wisconsin

October	November	December	January	February	March	April	May	June	July	August	September

FLOW DATA NOT APPLICABLE --- LAKE LEVELS ONLY

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE MICHIGAN

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN LAKE SUPERIOR

STATION LOCATION ST. MARYS RIVER AT SAULT STE. MARIE, MICHIGAN 66

DATE SAMPLE TAKEN			DATE OF DETERMINATION		RADIOACTIVITY IN WATER: ALPHA			RADIOACTIVITY IN WATER: BETA				RADIOACTIVITY IN PLANKTON (dry): DATE OF DETERMINATION		GROSS ACTIVITY			RADIOACTIVITY IN WATER: GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	24	60*	11	8	0	1	1	0	0	0									
11	28	60*	12	8	0	1	1	0	0	0									
12	26	60*	1	9	0	1	1	0	2	2									
1	30	61*	2	10	0	0	0	0	1	1									
2	27	61*	3	10	0	0	0	0	0	0									
3	27	61*	4	7	0	0	0	0	0	0									
4	24	61*	5	5	0	0	0	0	1	1									
5	28	61*	6	9	0	0	0	0	0	0									
6	26	61*	7	14	0	0	0	0	0	0									
7	31	61*	8	28	0	1	1	0	3	3									
8	28	61	9	18	0	0	0	3	4	7									
9	4	61	10	5	-	-	-	0	0	0									
9	11	61	10	5	-	-	-	0	0	0									
9	18	61	10	13	-	-	-	0	0	0									
9	25	61	10	4	0	0	0	1	1	2									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE MICHIGAN
MAJOR BASIN WESTERN GREAT LAKES
MINOR BASIN LAKE SUPERIOR
STATION LOCATION ST. MARYS RIVER AT
SAULT STE. MARIE, MICHIGAN 66

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	3	60	200	. 20				20		50	70	50	220	2	20	95	20	24	10	16	10	60			2	1			------
10	17	60										50	430	2	20	95	10	6	10	46	10	60			3	1			------
11	7	60	100						20		70	20	310	95	10	3	10	47	10	6	10	70	20						------
11	21	60	100					20		20	20	70	70	3	20	95	10	6	10	47	10	60	70		3				------
12	5	60	100						70	20	40	20	370	47	10	95	10	46	10	2	10	70	20						------
12	19	60									20		20	2	10	95	10	94	*	6	*	70			2				------
1	2	61	100								70		50	95	20	2	10	47	10	94	10	60		10		1			------
1	16	61	100								110		130	95	20	47	10	60	10	2	10	60	20		2				------
2	6	61	100							50	20		70	47	50	95	10	60	10	9	*	30	20		4				------
2	20	61											50	60	20	95	20	47	10	91	10	40							------
3	6	61	200		20					70	110	70	50	95	20	60	10	82	10	47	10	50	20		3				------
3	20	61	100					20			90			95	20	94	10	30	10	77	10	60	20		2				------
4	3	61				20					20		20										50						------
4	17	61									50	20	70	95	30	89	10	47	10	92	10	50			3	1		1	------
5	1	61	100							20	90		160	95	50	92	10	60	10	89	*	20	200		3				------
5	15	61	500			20		20	60	170	250	60	100	60	20	95	20	9	10	92	10	50			3				------
6	5	61	400			40		20	20	20	330		150																------
6	19	61	200								170		120	95	20	94	10	89	10	2	10	60			15				------
7	3	61	400		20	80		20	60	40	120		150	95	20	2	10	60	10	89	10	50			30	14			------
7	17	61	300						80	120	80	60	100	95	30	30	10	2	10	25	10	50			78	11	1		------
8	7	61	300			40			40	40	210	20	40	95	50	24	20	25	10	9	10	30			8	2			------
8	21	61	200			20			20	80	120	20	190	95	60	24	20	2	10	25	10	10							------
9	5	61	200	20						60	120		120	24	30	95	20	25	10	47	*	40				1			------
9	18	61	100					20	20	40	40		20	95	20	47	10	2	10	30	10	60			13				------

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE MICHIGAN

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN LAKE SUPERIOR

STATION LOCATION ST. MARYS RIVER AT
SAULT STE. MARIE, MICHIGAN 66

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	3	60	10	18	7635	114	18	96	1	6	4	1	0	3	0	2	1	0	4
11	7	60	11	20	4717	124	19	105	1	7	4	1	1	2	0	2	1	0	4
12	5	60	12	19	5205	115	24	91	3	8	4	1	1	2	0	2	1	1	5
1	4	61	1	16	4702	125	17	108	1	5	4	1	1	2	0	1	1	0	5
2	6	61	2	20	4268	124	23	101	1	7	3	0	0	3	0	1	1	0	10
3	8	61	3	20	4500	143	25	118	1	11	4	1	0	3	0	2	2	0	5
4	4	61	4	17	4710	110	26	84	-	-	-	-	-	-	-	-	-	-	-
5	2	61	5	15	4635	110	34	76	-	-	-	-	-	-	-	-	-	-	-
6	5	61	6	19	4245	118	20	98	-	-	-	-	-	-	-	-	-	-	-
6	5	61		*	13590	113	27	86	3	10	5	2	1	2	0	2	2	0	5
7	6	61	7	17	3840	114	21	93	-	-	-	-	-	-	-	-	-	-	-
8	7	61	8	21	4785	116	22	94	-	-	-	-	-	-	-	-	-	-	-
9	6	61	9	18	3603	102	13	89	-	-	-	-	-	-	-	-	-	-	-
9	6	61		*	12228	111	19	92	1	6	5	2	1	2	0	1	1	0	5

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MICHIGAN
MAJOR BASIN WESTERN GREAT LAKES
MINOR BASIN LAKE SUPERIOR
STATION LOCATION ST. MARYS RIVER AT
SAULT STE. MARIE, MICHIGAN 66

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	3	60	12.0	10.2	8.0	-	4	.3	.9	.0	1	47	46	0	4	-	-	-	6
10	10	60	12.5	10.0	8.0	-	3	.3	1.0	.0	1	45	45	5	11	-	-	-	7
10	17	60	12.0	10.9	8.0	-	3	.3	1.2	.1	1	46	46	5	19	-	-	-	25
10	24	60	8.5	11.8	8.0	-	4	.3	1.1	.0	1	47	45	5	10	-	-	-	10
10	31	60	10.0	11.6	8.0	-	3	.3	1.0	.0	1	46	45	0	13	-	-	-	7
11	7	60	7.5	12.7	8.0	-	3	.3	1.0	.0	1	46	45	0	17	-	-	-	10
11	14	60	7.2	12.8	7.8	-	3	.3	1.0	.1	1	46	46	0	8	-	-	-	10
11	21	60	7.0	13.1	7.6	-	3	.3	1.0	.1	1	46	45	0	9	-	-	-	36
11	28	60	6.0	13.3	7.8	-	3	.3	1.1	.1	1	46	46	0	5	-	-	-	17
12	5	60	5.0	13.5	6.8	-	5	.3	1.2	.0	1	46	46	0	7	-	-	-	11
12	12	60	1.3	15.0	7.8	-	3	.3	.7	.0	1	46	45	0	3	-	-	-	4
12	19	60	1.0	16.4	7.6	-	3	.3	.9	.0	1	46	45	0	3	-	-	-	11
12	26	60	.0	13.2	7.6	-	8	.2	.6	.0	1	46	45	0	2	-	-	-	1
1	2	61	.0	13.4	7.6	-	-	.2	1.0	.0	1	45	45	0	2	-	-	-	*1
1	9	61	.0	13.8	7.6	-	-	.3	.8	.0	1	46	46	0	3	-	-	-	2
1	16	61	.0	13.7	7.8	-	-	.3	.8	.0	1	46	45	0	2	-	-	-	*1
1	23	61	.0	13.7	7.6	-	-	.3	.8	.0	1	46	47	0	3	-	-	-	1
1	30	61	.0	13.7	7.7	-	-	.2	.9	.0	1	47	47	0	2	-	-	-	*1
2	6	61	.0	13.8	7.7	-	-	.3	.9	.0	1	47	47	0	2	-	-	-	2
2	13	61	.0	13.8	7.6	-	-	.3	.9	.0	1	47	45	0	2	-	-	-	1
2	20	61	.0	13.7	7.7	-	-	.3	.8	.0	1	47	46	0	1	-	-	-	1
2	27	61	.2	13.7	7.7	-	-	.3	.7	.0	1	46	46	0	-	-	-	-	1
3	6	61	.3	13.5	7.6	-	-	.3	.8	.0	1	47	46	0	-	-	-	-	*1
3	13	61	.2	13.4	7.6	-	-	.3	1.0	.0	1	47	47	0	-	-	-	-	1
3	20	61	.2	13.7	7.6	-	-	.3	.9	.0	1	46	47	0	-	-	-	-	1
3	27	61	.5	13.5	7.7	-	-	.3	.9	.0	1	46	46	0	-	-	-	-	*1
4	3	61	.5	13.6	7.7	-	6	.4	.9	.0	1	46	45	0	-	-	-	-	5
4	10	61	.5	13.2	7.6	-	6	.3	1.0	.0	1	46	45	0	-	-	-	-	6
4	17	61	.8	13.3	7.6	-	6	.5	1.9	.0	1	46	45	0	-	-	-	-	5
4	24	61	2.3	13.5	7.6	-	6	.5	1.2	.0	1	46	45	0	-	-	-	-	*10
5	1	61	3.2	13.3	7.8	-	7	.5	1.4	.0	1	47	43	0	-	-	-	-	1
5	8	61	4.0	13.4	7.8	-	7	.5	1.1	.0	1	46	43	0	-	-	-	-	2
5	15	61	5.7	12.9	7.8	-	7	.5	.9	.0	1	46	44	0	0	-	-	-	1
5	22	61	5.6	12.7	7.8	-	10	.5	1.0	.0	1	46	45	0	0	-	-	-	5
5	29	61	7.5	12.4	8.0	-	8	.5	.9	.0	1	46	45	0	0	-	-	-	3
6	5	61	8.2	12.4	7.7	-	8	.5	1.3	.0	1	46	46	0	-	-	-	-	2
6	12	61	8.8	12.2	7.9	-	8	.6	1.3	.0	1	47	45	0	-	-	-	-	6
6	19	61	11.7	11.2	7.9	-	7	.5	1.2	.0	1	46	46	0	-	-	-	-	3
6	26	61	10.8	11.1	7.9	-	8	.6	1.6	.0	1	46	44	0	0	-	-	-	49

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MICHIGAN

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN LAKE SUPERIOR

STATION LOCATION ST. MARYS RIVER AT

SAULT STE. MARIE, MICHIGAN 66

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	3	61	11.9	10.9	7.9	–	7	.6	1.5	.0	1	42	45	0	0	–	–	–	–
7	10	61	14.1	10.1	8.0	–	7	.7	1.7	.0	1	42	44	0	0	–	–	–	8
7	17	61	13.9	10.5	7.9	–	7	.8	2.0	.0	1	40	44	0	0	–	–	–	11
7	24	61	16.5	10.2	8.0	–	7	1.0	1.9	.0	2	41	44	0	0	–	–	–	14
7	31	61	18.6	9.9	8.0	–	7	1.0	2.0	.0	2	39	44	0	0	–	–	–	6
8	7	61	18.4	9.9	8.0	–	8	1.0	1.9	.0	2	42	45	0	0	–	–	–	47
8	14	61	18.0	9.5	7.9	–	7	1.0	1.8	.0	2	41	44	0	0	–	–	–	12
8	21	61	18.5	10.3	7.9	–	11	1.0	1.7	.0	2	42	45	0	0	–	–	–	9
8	28	61	19.1	10.7	8.0	–	11	1.0	1.8	.0	2	40	43	0	0	–	–	–	5
9	4	61	20.1	10.8	7.9	–	8	1.1	1.9	.0	2	40	45	0	0	–	–	–	15
9	11	61	20.4	10.6	7.9	–	7	1.1	2.1	.0	2	40	44	0	–	–	–	–	16
9	18	61	17.0	10.0	7.8	–	6	.6	1.3	.0	2	40	44	0	0	–	–	–	36
9	25	61	15.8	9.1	7.8	–	6	.6	.9	.0	2	40	45	0	0	–	.0	–	140

MEAN MONTHLY FLOW - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Supplied by U.S. Army Corps of Engineers
U.S. Lake Survey

STATE Michigan

MAJOR BASIN Western Great Lakes

MINOR BASIN Lake Superior

STATION LOCATION St. Marys River at Sault Ste. Marie, Michigan

October	November	December	January	February	March	April	May	June	July	August	September
92.000	73.000	68.000	67.000	67.000	66.000	66.000	68.000	69.000	65.000	57.000	57.000

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE MINNESOTA

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN LAKE SUPERIOR

STATION LOCATION LAKE SUPERIOR AT DULUTH, MINNESOTA

16

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	24	60*	11	3	0	1	1	0	0	0									
11	21	60*	12	22	0	0	0	0	0	0									
12	27	60*	1	11	0	2	2	0	0	0									
1	30	61*	2	10	0	0	0	0	1	1									
2	28	61*	3	13	0	0	0	0	0	0									
3	27	61*	4	7	0	0	0	0	0	0									
4	24	61*	5	12	0	0	0	0	0	0									
5	29	61*	6	9	0	0	0	0	0	0									
6	26	61*	7	12	0	0	0	0	0	0									
7	31	61*	8	23	0	0	0	0	3	3									
8	30	61	9	18	0	0	0	3	0	3									
9	5	61	10	3	-	-	-	0	8	8									
9	11	61	10	6	0	0	0	1	3	4									
9	18	61	10	18	0	0	0	1	0	1									
9	25	61	10	10	-	-	-	0	3	3									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE: MINNESOTA
MAJOR BASIN: WESTERN GREAT LAKES
MINOR BASIN: LAKE SUPERIOR
STATION LOCATION: LAKE SUPERIOR AT DULUTH, MINNESOTA

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS														PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE							
10	4	60												95	20	58	20	25	10	82	10	40			1	1			------
10	19	60									20	20	50	82	40	95	10	28	10	91	10	40							------
11	7	60	100			20			20		20	20		95	10	80	10	60	10	28	10	50	40						------
11	21	60	100					20	20	20	20			81	10	84	10	95	10	25	10	60	20						------
12	5	60	100								50	70	70	84	20	30	10	60	10	56	10	60							------
12	19	60										20		84	20	82	10	91	10	60	10	60							------
1	3	61	100							50	20	20	20	81	10	60	10	24	10	80	10	70							------
1	17	61									20		20																------
2	6	61	100							20			20	60	30	47	10	30	10	84	10	50		10					------
2	20	61								20	20	20		60	10	93	10	91	10	84	10	60							------
3	6	61						20	20				70	82	20	84	20	60	10	91	10	50	90						------
3	20	61								20	20												20						------
4	3	61	300			90		40		130	20		40										70						------
4	17	61	300			150				60	120	40	40												1	1			------
5	1	61	200							80	80		40	60	40	9	20	89	10	95	10	30			1				------
5	15	61	200							60	120		80	92	20	49	10	60	10	56	10	60	40						------
6	5	61	200		20	120		20			60	40	40	60	40	9	20	94	10	95	10	20	60			3			------
6	19	61	100			40				60	40		40	60	40	94	10	9	10	61	*	50							------
7	11	61	100			60				20	40		40	60	40	56	20	91	10	9	*	30	40	20	3	5			------
7	17	61	200		20					40	120		100	60	50	91	20	95	10	56	10	20	3540	10					------
8	7	61	400						110	90	180	20	270	47	30	95	20	56	20	58	10	20	200		18	5			------
8	19	61	200			60			20	100	40	40	40	47	30	25	20	24	10	9	10	40			3	10			------
9	5	61	100						20	50	50	50	20	95	30	24	20	47	10	58	10	30			7	19			------
9	18	61	100							120	20	80	20	24	40	25	20	95	10	9	10	20	40		4				------

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE MINNESOTA
MAJOR BASIN WESTERN GREAT LAKES
MINOR BASIN LAKE SUPERIOR
STATION LOCATION LAKE SUPERIOR AT DULUTH, MINNESOTA

16

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	4	60	10	17	6518	110	23	87	2	8	4	1	0	3	0	2	2	0	5
11	7	60	11	21	6195	96	16	80	1	6	4	1	1	2	0	1	1	0	3
12	6	60	12	19	6397	96	12	84	0	4	3	0	1	2	0	1	1	0	3
1	4	61	1	17	5595	97	18	79	0	7	3	0	0	3	0	1	1	0	6
2	6	61	2	20	5920	130	23	107	3	8	3	0	0	3	0	2	1	0	6
3	7	61	3	20	6247	*	18	*	2	6	3	0	0	3	0	2	1	0	4
4	4	61	4	18	5580	106	28	78	-	-	-	-	-	-	-	-	-	-	-
5	5	61	5	22	7733	81	16	65	-	-	-	-	-	-	-	-	-	-	-
6	5	61	6	19	7080	82	22	60	-	-	-	-	-	-	-	-	-	-	-
6	5	61		*	20393	88	21	67	2	8	4	1	1	2	0	1	1	0	5
7	6	61	7	19	5228	155	34	121	-	-	-	-	-	-	-	-	-	-	-
8	7	61	8	19	5580	111	20	91	-	-	-	-	-	-	-	-	-	-	-
9	7	61	9	21	6510	93	18	75	-	-	-	-	-	-	-	-	-	-	-
9	7	61		*	17318	116	22	94	2	7	4	1	0	3	0	3	1	0	5

*LABORATORY ACCIDENT

665709 O - 62 - 14

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MINNESOTA

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN LAKE SUPERIOR

STATION LOCATION LAKE SUPERIOR AT DULUTH, MINNESOTA

16

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	3	60	4.4	12.6	7.6	.3	7	.9	2.0	.0	2	43	41	0	0	2	.0	46	23
10	10	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
10	11	60	5.6	12.5	7.5	.2	7	.7	1.8	.0	2	43	41	0	0	2	.0	60	-
10	17	60	4.4	12.6	7.3	.5	6	.6	1.5	.0	2	42	44	0	0	2	.0	53	10
10	24	60	4.4	12.5	7.3	.5	6	.6	1.5	.0	2	42	43	0	1	2	.0	57	3
10	31	60	4.4	12.7	7.7	.3	5	.7	1.5	.0	2	43	41	0	0	1	.0	48	3
11	7	60	4.4	12.5	7.5	.4	7	.9	1.8	.0	2	43	41	0	0	2	.0	64	4
11	14	60	4.4	12.6	7.3	.7	5	.8	1.7	.0	2	43	41	0	0	1	.0	49	*3
11	21	60	4.4	12.6	7.4	1.0	5	.7	1.5	.0	0	43	42	0	0	1	.0	48	8
12	5	60	3.3	12.9	7.4	.7	4	.8	1.6	.0	2	43	42	5	5	1	.0	73	9
12	12	60	3.3	13.0	7.4	.6	6	.8	1.8	.0	2	43	42	5	3	2	.0	61	96
12	19	60	3.9	13.0	7.5	.5	4	.8	1.7	.0	2	43	41	0	1	2	.0	48	6
12	27	60	3.3	13.3	7.5	.8	4	.9	1.7	.0	2	42	41	0	1	2	.0	55	2
1	3	61	3.9	13.2	7.4	.9	3	.7	1.5	.0	2	42	41	1	1	2	.0	56	2
1	9	61	3.3	13.3	7.4	1.0	4	.7	1.4	.0	2	44	42	1	1	1	.0	60	2
1	17	61	3.3	13.0	7.5	.4	4	.8	1.6	.0	2	42	41	1	1	1	.0	52	*1
1	23	61	2.8	13.2	7.4	.3	4	.9	1.5	.0	2	43	41	1	1	1	.0	58	2
1	30	61	2.8	13.2	7.6	.3	4	.9	1.9	.0	2	44	43	5	0	1	.0	58	4
2	6	61	1.7	14.0	7.4	.3	3	.7	1.7	.0	2	46	44	0	1	2	.0	70	1
2	13	61	1.1	14.1	7.7	.3	3	.8	2.0	.0	1	45	44	0	1	1	.0	53	2
2	20	61	1.1	13.9	7.6	.3	3	.8	2.0	.0	1	43	42	0	0	1	.0	53	1
2	27	61	1.1	14.0	7.5	.4	3	.7	1.7	.0	1	43	42	0	0	1	.0	53	-
2	28	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*1
3	6	61	1.1	13.9	7.5	.2	2	.7	1.7	.0	1	44	44	0	0	1	.0	49	1
3	13	61	1.1	13.8	7.4	.2	2	.7	1.7	.0	1	43	42	0	0	1	.0	52	1
3	20	61	.6	13.9	7.5	.3	6	.6	1.5	.0	2	44	43	0	0	2	.0	56	9
3	27	61	1.1	13.6	7.5	.3	6	.8	2.0	.0	2	44	43	5	2	3	.0	53	5
4	3	61	1.7	13.9	7.5	.1	6	.9	1.9	.0	1	45	44	5	1	4	.0	58	*1
4	10	61	1.1	13.9	7.6	.2	3	.9	2.0	.0	2	45	44	5	1	4	.0	64	*1
4	17	61	1.7	13.8	7.6	.2	9	1.0	2.0	.0	1	44	44	5	1	5	.0	44	6
4	24	61	1.7	13.7	7.6	.1	9	.9	2.1	.0	1	46	44	5	2	4	.0	60	6
5	1	61	2.8	13.3	7.6	.2	9	1.1	2.2	.0	2	44	44	0	3	2	.0	52	54
5	6	61	3.9	13.4	7.6	.3	9	.8	1.7	.0	2	42	43	0	0	3	.0	55	-
5	8	61	2.2	13.7	7.6	.3	7	1.0	2.0	.0	2	45	44	5	2	2	.0	50	84
5	15	61	2.2	13.2	7.5	.4	8	.8	1.7	.0	2	44	43	5	4	3	.0	63	100
5	22	61	2.8	13.5	7.6	.3	8	.9	1.9	.0	2	43	43	0	1	2	.0	60	6
5	29	61	3.3	13.5	7.7	.3	8	.9	1.9	.0	2	42	42	0	1	3	.0	58	-
6	2	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
6	5	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MINNESOTA

MAJOR BASIN WESTERN GREAT LAKES

MINOR BASIN LAKE SUPERIOR

STATION LOCATION LAKE SUPERIOR AT DULUTH, MINNESOTA

16

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
6	11	61	4.4	12.7	7.5	.6	9	.8	2.0	.0	2	43	44	0	0	3	.0	61	-
6	12	61	4.4	13.4	7.5	.3	6	.9	1.6	.0	2	42	43	5	0	3	.0	54	-
6	13	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
6	19	61	3.9	13.1	7.6	.3	11	.8	1.9	.0	2	42	44	5	1	3	.0	49	1
6	26	61	5.6	12.5	7.6	.5	10	1.0	2.1	.0	2	43	44	0	0	3	.0	66	*1
7	11	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
7	17	61	6.1	13.0	7.6	.6	9	.7	1.5	.0	2	42	44	5	0	3	.0	54	4
7	31	61	15.6	10.5	7.8	.7	9	.8	1.6	.0	2	43	43	5	0	3	.0	59	21
8	7	61	11.1	11.3	7.3	.5	10	.7	1.8	.0	2	42	44	0	2	3	.0	53	40
8	14	61	4.4	12.9	7.7	.6	8	.6	1.4	.0	2	42	44	0	0	3	.0	55	4
8	30	61	15.6	10.6	7.9	.3	10	.6	1.6	.0	2	42	44	0	0	3	.0	59	-
9	5	61	11.7	11.8	7.7	.6	7	.7	1.5	.0	2	42	44	0	0	4	.0	53	2
9	11	61	13.3	10.9	7.7	.3	8	.7	1.4	.0	2	42	44	0	0	3	.0	47	8
9	18	61	13.3	10.6	7.6	.2	8	.5	1.8	.0	2	42	44	0	1	3	.0	62	7
9	25	61	12.2	10.3	7.6	.3	9	.8	1.6	.0	2	42	44	5	1	3	.0	56	9

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Supplied by U.S. Army Corps of Engineers
U.S. Lake Survey

STATE	Minnesota
MAJOR BASIN	Western Great Lakes
MINOR BASIN	Lake Superior
STATION LOCATION	Lake Superior at Duluth, Minnesota

October	November	December	January	February	March	April	May	June	July	August	September
		FLOW	DATA	NOT	APPLICABLE	---	LAKE	LEVELS	ONLY		

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE NEW YORK
MAJOR BASIN NORTHEAST
MINOR BASIN LOWER HUDSON RIVER
STATION LOCATION HUDSON RIVER BELOW
POUGHKEEPSIE, NEW YORK 18

DATE SAMPLE TAKEN MO.	DAY	YEAR	DATE OF DETERMINATION MONTH	DAY	RADIOACTIVITY IN WATER ALPHA SUSPENDED µµc/l	ALPHA DISSOLVED µµc/l	ALPHA TOTAL µµc/l	BETA SUSPENDED µµc/l	BETA DISSOLVED µµc/l	BETA TOTAL µµc/l	RADIOACTIVITY IN PLANKTON (dry) DATE OF DETERMINATION MO.	DAY	GROSS ACTIVITY ALPHA µµc/g	GROSS ACTIVITY BETA µµc/g	RADIOACTIVITY IN WATER GROSS ACTIVITY SUSPENDED µµc/l	DISSOLVED µµc/l	TOTAL µµc/l
10	12	60*	11	1	0	2	2	0	1	1							
10	19	60	11	21	-	-	-	0	3	3							
11	9	60*	11	29	1	2	3	0	0	0							
11	30	60*	12	12	-	-	-	0	0	0							
12	14	60	1	12	0	2	2	0	3	3							
12	28	60	1	18	-	-	-	0	0	0							
1	11	61*	1	27	0	0	0	0	1	1							
2	1	61*	2	16	-	-	-	0	0	0							
2	15	61*	3	2	1	0	1	0	0	0							
3	1	61	3	22	-	-	-	0	0	0							
3	15	61*	3	27	2	0	2	3	0	3							
3	29	61	4	12	-	-	-	0	0	0							
4	12	61*	4	27	1	0	1	0	0	0							
4	26	61*	5	15	-	-	-	0	0	0							
5	10	61*	5	25	0	0	0	0	0	0							
5	24	61	7	5	0	0	0	0	0	0							
6	14	61*	7	17	0	0	0	1	3	4							
6	28	61	7	31	-	-	-	2	0	2							
7	12	61	8	7	-	-	-	0	0	0							
8	2	61	8	31	-	-	-	0	2	2							
8	16	61*	9	19	-	-	-	0	6	6							
8	30	61	9	25	-	-	-	6	6	12							
9	13	61	10	27	-	-	-	8	5	13							
9	20	61	10	11	-	-	-	5	3	8							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE NEW YORK
MAJOR BASIN NORTHEAST
MINOR BASIN LOWER HUDSON RIVER
STATION LOCATION HUDSON RIVER BELOW POUGHKEEPSIE, NEW YORK 18

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	5	60	300							200	50	70	70	58	20	26	10	56	10	19	10	60	20	10					------
10	19	60	400					70		270	70	70	130	58	20	29	10	19	10	56	10	50	20		1	10			-----7
11	2	60	800			20		50	70	550	90	350	290	58	10	82	10	56	10	29	10	50	90	10	3	4			-----7
11	16	60	700			50		20		530	130	570	130	56	40	58	10	19	10	29	10	40	20	10	11	3			-----7
12	7	60	1200			220		90	20	630	220	740	270	56	30	19	10	29	10	57	10	50	20		8				48--7
12	28	60	300			50		20	70	110		340	110	56	10	26	10	29	10	58	10	60	20		11				------
1	4	61	200		20	20		20		160		400	180	58	20	65	10	56	10	82	10	50		10	49		1		------
1	19	61	100						20	90	20	90	70	29	10	26	10	58	10	56	10	50		10	14				------
2	1	61				20					20	90	20	58	20	56	10	29	10	82	10	60		30	36				------
2	15	61										20	20	58	20	56	10	65	10	92	10	60		10	12	2			------
3	1	61	300							70	250	50	400	92	10	36	10	62	10	58	10	60					8		------
3	15	61	600			40				290	220	40	200	56	20	58	10	29	10	92	10	50			1		3		-----7
4	5	61	400			20		90		90	160	90	110	29	10	58	10	56	10	19	10	60	40						------
4	19	61	1100					150		540	390	150	310	56	10	58	10	82	10	92	10	60	170		4	5	1		4-9--
5	3	61	1200					190	20	500	520	20	350	58	10	19	10	56	10	92	10	70			4	2	1		4----
5	24	61	800	20	60	60		130		350	190	230	230	56	30	19	10	58	10	85	10	40			4	2			-----7
6	7	61	100								110	220	400	58	20	29	10	56	10	19	10	60			5	26			------
6	28	61	700		20	60		20		370	190	170	120	29	20	58	10	68	10	56	10	60		10	5	5			-----7
7	12	61	700			40				330	310	190	120	56	20	58	20	29	10	19	10	50			1	4			4----
8	2	61	800			40		60		480	270	170	80	19	30	29	20	58	10	26	*	40			46	21	1		-----7
8	16	61	600			60		60		390	60	40	40	19	40	29	20	58	10	68	10	30	160						-----7
8	30	61	1000			40		40		580	290	60	190	19	30	29	20	58	20	56	*	40			4	3			4---7
9	13	61	800					100		370	290	150	80	26	10	58	10	29	10	19	10	60			2	5			-----7
9	20	61	700			100		60		460	100	170	100	58	10	19	10	29	10	56	10	50			17	2			-----7

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE NEW YORK

MAJOR BASIN NORTHEAST

MINOR BASIN LOWER HUDSON RIVER

STATION LOCATION HUDSON RIVER BELOW POUGHKEEPSIE, NEW YORK

18

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	5	60	10	13	5106	172	50	122	1	10	16	2	2	11	1	7	5	1	10
11	2	60	11	11	5372	203	58	145	2	12	18	2	2	13	1	8	5	1	12
12	7	60	12	16	5465	243	66	177	3	15	21	2	2	16	1	9	5	1	12
1	9	61	1	19	5266	273	62	211	3	11	27	3	3	20	1	8	4	1	8
2	16	61	2	24	5400	245	73	172	1	15	26	5	3	17	1	9	6	1	15
3	15	61	3	24	5893	148	38	110	0	8	17	2	2	12	1	5	2	0	6
5	3	61	5	11	5381	150	62	88	3	15	21	4	3	13	1	8	5	1	9
6	9	61	6	19	6270	152	53	99	1	12	19	3	3	13	0	7	5	1	8
8	3	61	8	11	5214	211	97	114	5	18	29	4	2	21	2	14	8	1	22
9	11	61	9	21	5296	184	84	100	2	17	26	3	2	19	2	13	10	2	14

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NEW YORK
MAJOR BASIN NORTHEAST
MINOR BASIN LOWER HUDSON RIVER
STATION LOCATION HUDSON RIVER BELOW
POUGHKEEPSIE, NEW YORK 16

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	5	60	17.5	5.8	7.3	1.0	12	.5	–	.1	6	38	72	25	34	18	–	–	1700
10	12	60	17.1	6.1	7.3	1.5	14	.2	2.3	.1	6	42	77	18	33	19	–	–	640
10	19	60	16.7	6.2	7.4	1.4	14	.2	–	.1	6	42	72	18	25	13	–	–	2000
11	2	60	13.1	8.0	7.4	–	14	–	–	.1	6	50	81	18	11	18	–	–	3900
11	9	60	10.9	8.2	7.6	.6	16	.2	2.1	.1	6	51	88	23	9	18	–	–	800
11	16	60	9.7	8.5	7.5	1.8	16	.6	–	.1	6	48	84	25	23	18	–	–	5100
11	23	60	8.8	9.1	7.5	1.3	16	–	–	.1	6	–	93	18	11	20	–	–	1400
11	30	60	7.7	9.1	7.4	–	15	.5	–	.1	6	49	82	18	15	16	–	–	8100
12	7	60	6.8	9.4	7.4	–	14	.4	–	.1	6	52	91	18	15	14	–	–	730
12	14	60	3.5	10.4	7.5	–	14	.4	–	.1	8	49	88	23	13	30	–	–	2700
12	28	60	.5	11.6	7.3	–	–	–	–	.1	6	52	84	23	10	18	–	–	2600
1	4	61	.6	11.1	7.2	2.0	18	.1	3.8	.2	6	49	85	25	11	13	–	–	5800
1	11	61	.7	11.0	7.2	2.0	18	.1	3.9	.2	6	49	84	23	9	12	–	–	3800
1	18	61	.5	10.8	7.2	–	23	.1	3.8	.2	6	56	82	18	10	15	–	–	–
1	19	61	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2800
1	25	61	.5	–	7.3	–	21	.1	3.6	.2	6	54	83	18	10	15	–	–	–
2	1	61	.5	–	~~7.3~~	–	24	.1	3.6	.2	6	50	88	18	22	20	–	–	2100
2	8	61	.5	–	7.2	–	24	.1	–	.2	6	54	93	18	28	18	–	–	1200
2	15	61	.6	7.7	7.1	–	24	–	–	.2	6	52	96	18	28	18	–	–	3100
2	22	61	.8	6.8	7.1	–	–	–	–	.3	6	58	98	25	18	22	–	–	–
3	1	61	.7	12.0	7.4	–	41	.1	4.1	.4	6	48	82	23	50	18	–	–	3700
3	8	61	1.7	11.0	7.7	–	20	.2	1.8	.1	2	47	77	25	43	10	–	–	1000
3	15	61	2.9	11.0	7.4	–	20	.2	1.6	.1	6	44	74	13	35	18	–	–	3000
3	29	61	4.0	11.3	7.4	1.6	18	.1	1.4	.1	6	43	80	18	12	13	–	–	2800
4	5	61	6.8	9.8	7.3	1.9	18	.1	–	.1	6	42	84	13	18	22	–	–	400
4	12	61	6.5	9.7	7.4	2.0	18	.1	–	.1	6	44	86	13	32	23	–	–	1100
4	19	61	7.0	10.2	7.4	1.1	22	.2	1.7	.1	6	42	81	23	24	25	–	–	400
4	26	61	9.1	10.1	7.4	1.3	–	.1	–	.1	6	45	83	18	13	23	–	–	1800
5	3	61	11.1	9.2	7.3	1.4	19	.5	–	.1	2	42	65	25	30	23	–	–	500
5	10	61	11.2	8.8	7.1	–	18	.3	–	.1	6	31	50	18	24	18	–	–	2200
5	24	61	16.5	6.5	7.1	–	16	.3	–	.1	4	46	71	18	11	20	–	–	1400
6	7	61	17.3	6.3	7.3	1.3	17	.2	2.0	.1	3	41	75	25	47	26	–	–	1000
6	14	61	20.8	5.2	7.3	1.4	16	.3	2.0	.1	4	54	82	25	60	18	–	–	1400
6	28	61	22.0	4.1	7.1	–	17	.4	2.4	.1	3	58	86	25	50	28	–	–	1300
7	12	61	23.7	3.7	7.2	–	16	.3	2.0	.1	4	48	78	18	40	20	–	–	3100

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NEW YORK
MAJOR BASIN NORTHEAST
MINOR BASIN LOWER HUDSON RIVER
STATION LOCATION HUDSON RIVER BELOW POUGHKEEPSIE, NEW YORK 18

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
8	2	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1600
8	9	61	25.8	4.0	7.2	1.0	8	.5	3.0	.1	4	44	82	18	22	20	-	-	2200
8	16	61	25.5	4.6	7.3	.7	12	.3	2.3	.1	5	44	84	23	22	20	-	-	900
8	30	61	24.8	4.6	7.2	-	11	.2	2.3	.1	6	40	88	18	22	23	-	-	1000
9	13	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1400
9	20	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6900

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Green Island, New York
Operated by U.S. Geological Survey

STATE: New York

MAJOR BASIN: Northeast

MINOR BASIN: Lower Hudson River

STATION LOCATION: Hudson River below Poughkeepsie, New York

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	8.950	7.500	11.200	4.840	5.090	36.600	19.600	26.700	8.830	7.910	6.370	9.140
2	7.850	8.800	9.830	2.990	3.820	27.000	18.900	24.200	9.670	6.970	7.180	7.120
3	5.340	9.980	8.680	2.990	3.740	23.200	17.500	24.800	11.900	7.110	6.970	4.700
4	7.140	9.440	6.970	5.420	3.820	23.400	15.800	21.900	11.900	7.110	8.210	5.710
5	6.410	9.850	4.880	5.700	3.450	22.300	13.300	20.100	10.000	6.640	6.640	5.910
6	6.190	8.240	7.550	5.820	2.190	24.400	10.600	16.700	10.600	7.550	5.410	7.630
7	6.290	6.900	7.550	4.790	4.200	31.200	11.500	17.200	10.200	7.180	2.990	6.770
8	6.450	8.340	7.620	4.700	4.290	28.500	11.500	20.300	9.750	6.970	5.290	6.640
9	4.410	8.290	7.910	3.290	4.290	23.700	11.900	20.000	11.600	5.920	6.300	5.680
10	3.630	7.760	6.430	5.090	4.420	19.800	9.910	27.700	14.700	4.740	6.240	4.380
11	5.940	10.100	5.570	5.250	4.290	17.200	11.600	32.200	18.900	5.860	6.640	3.780
12	6.060	11.100	3.780	5.420	3.410	16.000	19.400	28.300	14.100	6.430	5.860	5.860
13	5.870	7.880	5.680	4.950	1.950	14.800	23.800	25.100	15.200	5.990	3.860	6.570
14	5.830	6.350	5.570	4.740	4.080	14.200	28.700	22.000	16.600	8.760	2.920	6.180
15	5.010	7.890	9.240	3.950	4.200	14.100	22.800	17.100	17.100	11.900	4.640	6.430
16	3.120	7.220	8.600	3.220	4.380	14.400	22.100	17.200	14.300	9.080	5.290	5.510
17	3.250	7.960	10.200	4.900	4.470	13.500	28.400	19.900	11.900	9.240	5.570	4.380
18	5.680	8.070	9.830	4.990	4.160	12.100	28.300	16.000	10.200	11.000	5.680	4.160
19	5.650	7.940	7.770	4.650	4.700	11.200	25.100	14.900	9.830	10.800	4.460	5.410
20	7.280	5.710	8.210	4.470	5.880	10.900	24.200	13.200	8.600	8.920	4.200	6.970
21	10.300	4.110	8.500	3.820	10.400	10.400	20.200	12.000	8.680	8.210	3.530	7.040
22	7.170	6.950	6.600	2.990	11.100	11.200	21.500	10.100	17.000	6.060	5.800	5.920
23	5.930	6.970	6.530	1.920	12.100	11.200	30.800	10.600	24.700	5.570	6.300	3.950
24	5.510	6.870	5.700	4.250	16.200	12.700	40.200	10.100	23.400	4.510	6.060	4.380
25	8.440	6.480	4.560	4.160	34.200	16.100	38.500	10.200	16.400	7.480	5.680	3.740
26	11.900	6.870	3.030	4.340	71.800	18.100	39.900	10.100	13.700	10.600	7.690	5.350
27	11.900	4.650	3.580	3.870	75.900	16.900	37.500	9.670	12.600	10.200	12.400	6.640
28	10.100	4.190	6.200	3.490	52.500	23.500	29.700	11.000	11.500	9.240	7.180	5.920
29	8.910	6.570	6.260	2.390		32.000	29.400	9.910	10.600	7.180	8.600	5.800
30	7.520	9.040	6.140	1.980		31.200	33.400	10.700	9.490	4.990	8.760	3.950
31	4.180		5.310	4.420		23.700		10.200		4.240	9.140	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE ILLINOIS

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN ILLINOIS RIVER

STATION LOCATION ILLINOIS RIVER AT

PEORIA, ILLINOIS 67

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA			DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	3	60	10	13	1	3	4	0	1	1							
10	10	60	10	20	1	1	2	0	9	9							
10	17	60	11	14	1	2	3	0	0	0							
10	31	60	11	10	0	3	3	6	0	6							
11	7	60	11	23	9	3	12	3	0	3							
11	14	60	11	29	1	6	7	0	0	0							
11	21	60	12	1	0	4	4	0	0	0							
11	28	60	12	7	2	2	4	0	6	6							
12	5	60	12	15	2	4	6	0	0	0							
12	12	60	12	28	1	4	5	0	0	0							
12	19	60	1	16	0	2	2	0	0	0							
12	27	60	1	10	2	4	6	0	43	43							
1	3	61	1	11	1	6	7	0	25	25							
1	9	61	1	23	0	4	4	0	1	1							
1	16	61	1	31	2	2	4	0	10	10							
1	23	61	2	7	0	2	2	0	0	0							
1	30	61	2	17	2	2	4	0	8	8							
2	6	61	2	17	0	1	1	0	0	0							
2	13	61	3	3	0	1	1	0	0	0							
2	27	61	3	20	0	1	1	0	0	0							
3	6	61	3	22	1	2	3	1	0	1							
3	13	61	3	29	2	0	2	0	21	21							
3	20	61	4	3	0	0	0	0	1	1							
3	27	61	4	14	4	1	5	4	0	4							
4	10	61*	5	3	0	2	2	0	0	0							
4	24	61*	5	10	1	0	1	0	0	0							
5	8	61*	5	19	1	4	5	4	0	4							
5	29	61*	6	8	2	3	5	2	0	2							
6	12	61*	6	30	1	0	1	0	17	17							
6	26	61*	7	18	0	1	1	0	8	8							
7	10	61*	8	1	1	3	4	0	0	0							
7	17	61	8	29	1	1	2	10	0	10							
8	14	61*	9	19	1	1	2	11	0	11							
8	28	61*	9	22	0	1	1	0	0	0							
9	5	61	9	29	-	-	-	0	8	8							
9	11	61	10	6	-	-	-	0	20	20							
9	18	61	10	23	-	-	-	0	0	0							
9	25	61	10	2	0	0	0	0	6	6							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE: ILLINOIS
MAJOR BASIN: UPPER MISSISSIPPI RIVER
MINOR BASIN: ILLINOIS RIVER
STATION LOCATION: ILLINOIS RIVER AT PEORIA, ILLINOIS

67

DATE OF SAMPLE			ALGAE (Number per ml.)										INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	3	60	22900	140	90	1300		1960	630	7600	11170	2100	1580	56	30	62	20	26	20	83	10	20	130		272	7			-----
10	17	60	7900	150		680		600	800	3580	2070	2310	530	83	30	62	30	56	20	26	10	10	150	10	26	2			-8967
11	7	60	11600	20	130	840		380	530	9370	380	1870	290	83	40	82	30	58	10	56	10	20	40	20	24	1			48937
11	21	60	32500	220	440	1060		660	400	29130	570	3040	4000	83	60	82	20	56	*	58	*	20	90	30	70	1			98937
12	5	60	10400		70	150		240	110	9480	310	1410	570	83	40	82	40	56	10	58	10	10	20		4				4-9-7
12	19	60	18300		90	160		350	110	17180	350	680	130	82	80	95	10	83	*	26	*	10		10	17				3294-
1	3	61	4300	20		70		180		3730	250	470	200	82	60	56	10	26	*	35	*	20	20						--93-
1	16	61	12700			70		250		11600	760	1770	470	82	20	83	10	95	10	26	10	40			3				349--
2	6	61	11300					380	20	10330	510	180	50	82	70	9	10	95	10	97	*	20		10	1				3-93-
2	20	61	13700			110		830	20	11820	940	1410	290	82	40	92	10	88	10	56	10	40			2				34933
3	6	61	42100			340		2640	70	31160	7950	1630	340	86	20	70	20	92	10	82	10	40		10	8				84933
3	20	61	13900			110		960		12060	760	630	510	82	60	83	10	92	10	56	10	30							71933
4	3	61	31800			1550		690	110	28530	930	1910	690	82	90	9	*	56	*	58	*	10			85	9	3		71928
4	17	61	48600	160		1430		2120	130	42180	2590	5720	1300	82	50	56	10	83	10	92	*	20			240	8			34933
5	1	61	2300			200		200	110	1270	470	1320	560	82	30	9	20	58	10	56	10	30	50	10	46	3			3-93-
5	15	61	19700		60	2150		990	60	13970	2460	4530	1010	82	30	56	20	83	10	58	10	30		20	154	7	7		-8927
6	5	61	43300	120	290	17780		4200		16950	4000	1040	470	56	20	82	20	58	20	80	10	40		30	999	547		3	51817
6	19	61	40000	250	1260	4510		2440	620	21450	9460	2010	850	56	30	58	30	83	20	26	*	10		20	62	9			41967
7	3	61	58700	40	5710	6340		4740	190	28980	12690	6560	1140	83	30	56	20	26	20	58	10	20		20	54	8	4		9496-
7	17	61	38500	540	4000	12590		3750	210	6520	10910	5670	1350	26	70	56	10	58	10	83	*	10	20		198	665			74967
8	7	61	8800	70	200	1740		1860	50	2700	2140	1900	1160	83	20	26	20	56	10	58	10	40			220	272			88967
8	21	61	18500	7440	1610	2570		3350	290	2280	960	2080	980	56	50	58	30	26	10	18	*	10	20	10	443	53			4233-
9	5	61	8100	20	20	1510	20	1840	40	2770	1820	600	250	56	50	18	10	26	10	58	10	20		10	61	11	2	1	48-37
9	18	61	5800	20	40	1550		460		2320	1430	790	460	56	70	26	10	58	10	18	*	*	40		155	11	2	2	48867

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE ILLINOIS
MAJOR BASIN UPPER MISSISSIPPI RIVER
MINOR BASIN ILLINOIS RIVER
STATION LOCATION ILLINOIS RIVER AT PEORIA, ILLINOIS

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
2	20	61	3	4	4899	378	111	267	2	19	57	2	4	46	5	15	7	3	8
4	24	61	5	4	4998	314	102	212	2	18	44	4	4	35	1	16	8	2	12
6	12	61	6	23	3446	515	239	276	5	36	102	13	11	76	2	36	24	5	31
8	15	61	8	16	195	*	-	-	-	-	-	-	-	-	-	-	-	-	-

*SAMPLE NOT PROCESSED-FLOW TOO LOW

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE ILLINOIS

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN ILLINOIS RIVER

STATION LOCATION ILLINOIS RIVER AT

PEORIA, ILLINOIS 67

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	18.5	9.4	8.2	-	-	-	-	-	40	164	278	25	70	-	-	-	300
10	10	60	18.5	10.9	8.5	-	-	-	-	-	43	168	282	25	70	-	-	-	100
10	17	60	19.0	8.6	8.3	-	-	-	-	-	46	168	270	25	55	-	-	-	140
10	31	60	13.5	9.9	8.3	-	-	-	-	-	45	170	270	25	70	-	-	-	200
2	6	61	1.5	13.9	7.4	-	-	-	-	-	44	194	294	15	30	-	-	-	190
2	13	61	2.2	13.7	7.7	-	-	-	-	-	43	188	280	20	35	-	-	-	90
2	20	61	2.0	12.4	7.7	-	-	-	-	-	41	180	278	20	70	-	-	-	86
2	27	61	5.0	13.7	8.0	-	-	-	-	-	48	174	260	20	50	-	-	-	190
3	6	61	9.5	10.7	8.0	-	-	-	-	-	37	172	262	30	65	-	-	-	140
3	13	61	8.2	12.0	8.0	-	-	-	-	-	32	180	292	25	100	-	-	-	10
3	20	61	6.0	11.5	8.0	-	-	-	-	-	35	172	296	20	65	-	-	-	1000
3	27	61	10.5	10.6	7.9	-	-	-	-	-	25	186	304	35	180	-	-	-	1500
4	3	61	8.8	12.1	8.1	-	-	-	-	-	26	176	308	25	70	-	-	-	500
4	10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	950
4	17	61	7.0	12.0	8.3	-	-	-	-	-	27	188	284	35	180	-	-	-	900
5	8	61	16.0	8.5	7.9	-	-	-	-	-	21	172	292	25	100	-	-	-	500
5	15	61	20.0	7.1	8.1	-	-	-	-	-	21	180	302	25	95	-	-	-	500
5	22	61	18.8	7.5	7.9	-	-	-	-	-	23	176	300	25	115	-	-	-	350
6	12	61	27.0	-	8.6	-	-	-	-	-	28	158	250	30	110	-	-	-	360
6	26	61	22.6	14.8	8.5	-	-	-	-	-	27	158	258	30	95	-	-	-	100
7	31	61	29.7	12.2	8.3	-	-	-	-	-	33	158	230	25	80	-	-	-	160
8	7	61	27.5	5.9	8.1	-	-	-	-	-	31	144	224	25	90	-	-	-	250
8	14	61	26.4	8.4	7.8	-	-	-	-	-	31	154	254	30	85	-	-	-	200
8	21	61	25.0	10.7	8.6	-	-	-	-	-	34	156	262	30	65	-	-	-	400
8	28	61	26.0	9.7	8.3	-	-	-	-	-	37	162	260	25	65	-	-	-	1000
9	5	61	27.0	7.5	8.3	-	-	-	-	-	38	156	252	20	65	-	-	-	1900
9	11	61	27.2	7.3	7.9	-	-	-	-	-	38	142	238	20	65	-	-	-	550
9	18	61	22.0	5.0	7.3	-	-	-	-	-	34	132	226	30	85	-	-	-	1200
9	25	61	20.0	7.5	7.7	-	-	-	-	-	25	130	230	35	150	-	-	-	14000

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Kingston Mines, Illinois
Operated by U.S. Geological Survey

STATE Illinois

MAJOR BASIN Upper Mississippi River

MINOR BASIN Illinois River

STATION LOCATION Illinois River at Peoria, Illinois

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	6.440	6.650	7.460	8.200	3.500	8.760	15.500	25.200	8.190	7.460	7.120	5.210
2	6.300	7.170	6.900	7.500	2.300	8.130	15.400	24.800	8.790	6.820	7.760	5.370
3	6.300	7.170	7.300	7.000	4.000	7.790	15.500	24.000	8.770	7.120	9.060	5.660
4	6.350	7.350	7.420	6.700	4.800	6.300	15.200	23.700	9.070	7.520	10.100	7.220
5	6.150	7.070	7.250	7.000	4.820	6.300	12.500	22.800	8.630	8.100	10.800	8.850
6	5.800	7.580	8.130	7.200	4.100	7.190	10.300	21.800	9.070	7.400	11.000	8.950
7	5.870	7.420	8.520	7.200	4.440	7.270	9.540	21.600	9.020	7.090	10.200	9.080
8	5.630	6.910	8.800	6.600	5.040	10.100	9.610	21.100	9.350	7.440	10.300	8.950
9	5.070	7.840	8.260	6.400	4.100	12.400	10.000	20.800	10.500	7.160	10.000	7.950
10	4.670	7.530	8.150	6.800	4.890	11.300	9.970	20.200	9.950	7.350	9.610	7.870
11	4.870	7.070	7.850	6.400	4.820	11.600	9.600	19.600	10.200	7.220	8.910	7.740
12	5.160	7.090	8.270	6.800	5.570	12.200	10.600	18.400	10.700	6.900	10.400	7.360
13	5.540	7.420	7.730	7.000	6.240	14.200	10.500	17.400	12.600	7.220	10.800	8.820
14	5.130	7.250	7.610	6.950	5.630	17.500	9.750	16.900	13.500	6.880	9.610	21.200
15	6.390	7.090	7.950	6.950	6.280	21.000	10.400	16.500	14.100	6.840	7.960	23.000
16	7.200	7.660	8.080	6.770	6.280	20.600	11.100	17.400	15.000	6.540	7.570	23.000
17	6.770	8.360	7.650	5.850	6.980	20.200	10.700	16.400	15.800	6.730	7.330	22.100
18	6.380	8.520	7.520	4.960	7.700	20.200	10.600	16.700	14.400	6.650	7.160	21.000
19	5.850	8.090	7.240	4.960	7.520	20.000	10.500	16.300	10.300	5.460	7.060	19.900
20	5.600	7.950	6.960	4.910	7.660	19.800	11.300	15.900	9.550	5.780	6.740	18.800
21	5.520	8.110	7.000	4.800	8.520	19.000	15.700	16.100	8.720	6.180	6.630	16.300
22	5.440	7.340	7.000	4.700	8.650	18.800	18.900	16.100	7.420	5.250	6.550	9.720
23	5.870	7.650	6.600	4.500	9.510	19.100	20.700	15.100	7.230	5.860	6.090	12.300
24	5.510	7.240	6.600	4.500	10.600	19.500	21.200	11.200	7.120	6.850	5.960	23.100
25	5.080	7.870	7.000	4.300	10.900	19.000	21.600	4.890	6.610	8.240	6.140	28.200
26	5.540	7.070	8.000	4.500	9.910	19.000	22.100	4.340	7.100	8.340	5.900	30.200
27	5.370	7.240	8.850	4.500	10.200	17.500	23.400	5.360	7.900	8.750	5.900	33.600
28	5.470	8.420	8.720	4.500	9.910	19.500	25.200	5.530	7.290	8.750	6.140	36.900
29	5.270	8.130	8.710	4.300		19.900	24.900	6.880	7.070	8.800	5.270	38.300
30	5.270	7.950	8.870	4.500		19.500	25.300	7.200	7.870	9.000	5.160	35.200
31	6.470		9.050	4.300		16.500		7.340		7.950	5.130	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE WEST VIRGINIA

MAJOR BASIN OHIO RIVER

MINOR BASIN KANAWHA RIVER

STATION LOCATION KANAWHA RIVER AT

WINFIELD DAM, WEST VIRGINIA 68

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	µµc/l	µµc/l	µµc/l	µµc/l	µµc/l	µµc/l	MO.	DAY	µµc/g	µµc/g	µµc/l	µµc/l	µµc/l
10	5	60	10	17	-	-	-	5	3	8							
10	19	60	11	14	-	-	-	0	0	0							
11	2	60	11	21	-	-	-	1	0	1							
11	10	60	11	28	0	1	1	0	0	0							
11	16	60	11	30	-	-	-	0	0	0							
11	23	60	12	1	-	-	-	0	2	2							
12	1	60	12	20	-	-	-	0	5	5							
12	8	60	12	29	-	-	-	0	0	0							
12	22	60	1	12	-	-	-	0	0	0							
12	29	60	1	23	-	-	-	0	0	0							
1	5	61	1	20	-	-	-	0	1	1							
1	11	61	1	27	0	1	1	0	0	0							
1	18	61	2	1	-	-	-	0	0	0							
1	26	61	2	8	-	-	-	0	0	0							
2	1	61	2	9	-	-	-	0	0	0							
2	7	61	2	23	-	-	-	0	0	0							
2	16	61	3	3	3	0	3	4	0	4							
2	23	61	3	8	-	-	-	1	0	1							
3	3	61	3	20	-	-	-	0	0	0							
3	11	61	3	28	-	-	-	0	0	0							
3	15	61	4	3	0	0	0	0	0	0							
3	23	61	4	13	-	-	-	2	0	2							
4	25	61*	5	22	0	0	0	0	0	0							
6	2	61*	6	15	0	0	0	0	0	0							
6	28	61*	7	21	0	0	0	0	0	0							
8	3	61*	8	29	2	1	3	4	0	4							
8	31	61*	9	19	0	0	0	0	0	0							
9	6	61	10	3	-	-	-	2	7	9							
9	13	61	10	30	-	-	-	5	5	10							
9	21	61	10	3	-	-	-	6	1	7							
9	28	61	10	12	0	0	0	3	9	12							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE WEST VIRGINIA
MAJOR BASIN OHIO RIVER
MINOR BASIN KANAWHA RIVER
STATION LOCATION KANAWHA RIVER AT
WINFIELD DAM, WEST VIRGINIA

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
			TOTAL	BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS														PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
MONTH	DAY	YEAR		COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST#	PERCENTAGE	SECOND#	PERCENTAGE	THIRD#	PERCENTAGE	FOURTH#	PERCENTAGE	OTHER PERCENTAGE							
10	4	60	200					110	50	50				28	50	26	20	82	10	70	*	30	40		31				-----
10	19	60	300			90		70		180													70						4----
11	2	60	500			200				250	20			26	30	28	20	27	10	82	10	30							4---5
11	23	60	100	20	20					20		40		2	40	65	10	28	10	27	10	40	90						-----
12	1	60												27	40	28	10	2	10	26	10	30			1				-----
12	23	60	200					20	20	200		40	40										110				4		-----
1	11	61	200							20	130	20	90																-----
2	1	61	100						20		50		20	64	20	2	10	65	10	9	10	60	70						-----
2	16	61	600							20	580	130	890	92	20	36	20	62	10	47	10	50					3		---7-
3	3	61	200							20	130		50	2	20	62	10	36	10	47	*	60							-----
3	15	61	200							20	160		110																-----
3	29	61	300						40	20	270	20	70										400		2		1	1	-----
4	26	61	600					60		60	440		210										1100						-----
5	16	61	600			20		20		70	490	130	850	92	30	47	20	36	10	62	10	50							-----
6	2	61	500			170		40		80	170		40										5960		93				-----
6	14	61	1200			60				930	250	120	80	58	10	56	10	27	10	92	10	50	20						4-9--
6	28	61	1000			250		170		560	60			82	30	27	30	58	10	26	*	30		10					4-9--
7	14	61	3900	20		2120		90	70	670	890	250	70	82	30	70	20	89	10	26	10	30			2				78163
8	3	61	700		40	60		20		20	560		20	62	60	74	20	50	*	97	*	20							----3
8	17	61	100			20		20		70	20	20	70	27	50	2	10	70	*	92	*	40	50	10	39				-----
8	31	61	2800		20	310		80		750	1680		290	70	60	27	20	89	*	26	*	10			73	16			48-6-
9	13	61	3600	20	60	700		950	60	410	1390	20	60	70	80	27	10	26	10	82	*	10	20						41-6-
9	28	61	4600	20		600		360		1990	1590	20	50	26	50	70	40	27	*						1				4186-

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER

(Parts per billion)

STATE WEST VIRGINIA

MAJOR BASIN OHIO RIVER

MINOR BASIN KANAWHA RIVER

STATION LOCATION KANAWHA RIVER AT WINFIELD DAM, WEST VIRGINIA 68

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	19	60	11	2	5160	2382	2239	143	0	112	672	13	108	363	188	45	22	45	1343
11	23	60	11	30	5140	1018	893	125	18	71	348	10	31	212	95	27	18	27	384
12	22	60	12	29	4120	1336	1194	142	12	96	609	24	91	353	141	36	24	24	393
1	12	61	1	18	3100	829	710	119	21	57	376	15	60	233	68	36	14	36	170
2	1	61	2	8	4730	1029	934	95	19	47	551	17	94	270	170	37	19	9	252
2	24	61	3	2	3070	284	118	166	1	13	76	14	17	39	6	8	4	1	15
3	15	61	3	23	4800	326	219	107	7	46	105	9	19	54	23	11	9	4	37
4	5	61	4	14	4220	310	204	106	12	43	78	7	7	50	14	10	10	6	45
5	16	61	5	23	5710	216	148	68	5	27	68	5	7	50	6	10	7	3	28
6	14	61	6	22	5930	488	376	112	8	49	180	9	36	106	29	30	19	8	82
7	13	61	7	20	5050	257	213	44	4	26	117	7	14	82	14	19	13	4	30
8	10	61	8	17	3010	857	666	191	20	87	226	7	25	185	9	40	33	20	240
9	7	61	9	14	5347	1134	1024	110	10	113	440	13	62	251	114	31	31	31	368
9	28	61	10	5	5040	962	780	182	8	78	406	12	61	236	97	39	24	24	201

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE WEST VIRGINIA

MAJOR BASIN OHIO RIVER

MINOR BASIN KANAWHA RIVER

STATION LOCATION KANAWHA RIVER AT WINFIELD DAM, WEST VIRGINIA 68

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	17	60	21.0	.0	7.1	16.2	52	-	-	3.1	183	64	116	20	20	48	-	178	-
10	20	60	21.5	.0	7.8	7.1	62	-	-	3.1	112	68	121	20	20	62	-	162	-
11	2	60	11.6	.0	7.5	10.0	76	-	-	1.4	32	47	62	20	2	28	-	168	-
11	10	60	12.0	.0	7.4	24.6	52	-	-	3.0	38	48	68	20	2	26	-	172	-
11	18	60	13.0	6.3	6.7	4.1	52	-	-	.8	43	42	120	20	2	24	-	132	-
11	23	60	14.0	.8	6.7	4.2	38	-	-	2.2	46	43	116	20	2	26	-	148	-
12	2	60	10.1	.4	6.9	8.8	32	-	-	3.8	62	49	114	10	4	57	-	192	-
12	7	60	8.1	1.0	7.0	6.2	40	-	-	3.2	58	50	130	20	2	28	-	221	-
12	14	60	6.0	.0	7.0	6.8	22	-	-	4.6	68	58	132	10	2	96	-	226	-
12	22	60	3.0	8.3	6.8	5.5	19	-	-	2.0	35	49	96	20	20	19	-	186	-
12	30	60	3.0	9.2	7.1	9.0	16	-	-	5.4	56	50	108	10	2	48	-	188	-
1	5	61	3.0	12.1	6.9	9.1	51	-	-	1.6	26	42	56	10	2	19	-	152	-
1	10	61	3.9	11.7	7.4	7.2	24	-	-	2.4	23	32	72	20	2	24	-	158	-
1	18	61	3.9	8.0	7.0	7.5	48	-	-	3.2	22	39	60	20	2	24	-	143	-
1	27	61	1.5	8.6	7.0	11.7	16	-	-	.6	28	32	64	20	2	24	-	162	-
2	1	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
2	2	61	3.9	9.0	6.9	9.1	16	-	-	1.0	28	34	68	20	2	24	-	132	-
2	8	61	3.2	11.6	7.0	3.5	42	-	-	3.0	38	39	100	20	2	28	-	168	-
2	9	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	330
2	28	61	3.5	11.4	7.1	6.6	120	-	-	2.2	14	25	50	20	75	48	-	184	-
3	3	61	4.2	12.2	7.2	7.2	-	-	-	2.2	32	42	62	20	22	24	-	184	6700
3	9	61	4.8	10.3	6.9	2.6	11	-	-	2.0	22	16	56	20	120	24	-	191	23000
3	15	61	4.8	11.0	6.7	5.0	36	-	-	1.2	26	16	52	20	10	19	-	167	-
3	24	61	8.0	11.0	7.0	3.5	3	-	-	1.0	32	30	60	20	20	19	-	161	-
3	29	61	-	9.7	6.7	4.1	-	-	-	1.2	18	17	66	20	25	19	-	185	-
3	30	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
4	14	61	9.2	10.1	7.3	3.0	9	-	-	2.2	32	42	74	20	10	28	-	138	-
4	19	61	10.0	10.9	7.0	4.4	-	-	-	1.0	14	25	50	20	10	28	-	132	6800
4	26	61	12.4	8.3	4.2	4.5	-	-	-	.4	14	2	54	10	10	48	-	126	-
5	26	61	20.0	1.4	6.6	6.1	29	-	-	1.2	29	34	80	10	10	48	-	188	-
5	31	61	21.0	.6	6.8	6.2	32	-	-	1.8	42	51	84	10	20	48	-	162	-
6	7	61	22.0	.4	6.6	4.7	29	-	-	2.8	42	49	96	10	20	10	-	194	-
6	14	61	24.0	3.8	6.5	-	34	-	-	.6	20	36	54	10	10	28	-	163	-
6	28	61	25.0	3.0	7.0	6.2	17	-	-	1.8	23	42	82	10	2	28	-	172	*170
7	6	61	25.0	.0	6.9	6.4	19	-	-	3.0	22	30	72	10	2	48	-	172	-
7	27	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44
8	10	61	28.0	.0	6.8	6.3	24	-	-	2.0	28	34	78	10	2	24	-	181	-
8	17	61	28.0	.5	6.2	-	57	-	-	2.0	28	40	90	10	2	98	-	180	570
8	25	61	27.0	.0	6.7	5.3	-	-	-	-	34	47	82	10	2	-	-	176	14

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE WEST VIRGINIA

MAJOR BASIN OHIO RIVER

MINOR BASIN KANAWHA RIVER

STATION LOCATION KANAWHA RIVER AT WINFIELD DAM, WEST VIRGINIA 68

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
8	31	61	28.0	.0	6.7	5.3	86	-	-	2.0	22	47	98	10	2	24	-	181	500
9	8	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2400
9	13	61	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-
9	14	61	28.0	.0	6.7	4.2	46	-	-	2.0	22	47	98	10	2	24	-	187	-
9	21	61	29.0	.0	7.1	11.1	28	-	-	2.2	160	52	128	10	2	24	-	-	-
9	28	61	29.0	.0	7.6	4.0	78	-	-	5.2	80	62	94	10	4	24	-	168	-
9	28	61	-	-	-	-	5	-	-	-	57	-	-	-	-	-	-	-	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Charleston, West Virginia
Operated by U.S. Geological Survey

STATE West Virginia

MAJOR BASIN Ohio River

MINOR BASIN Kanawha River

STATION LOCATION Kanawha River at Winfield Dam, West Virginia

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	2.600	4.530	4.360	19.800	5.420	72.800	21.100	24.800	6.090	5.490	10.000	4.480
2	2.600	4.530	4.360	18.800	5.420	56.600	27.500	48.200	6.090	5.490	10.000	4.480
3	2.600	4.530	4.360	17.900	5.420	40.600	24.900	38.100	6.090	5.490	10.000	4.480
4	2.600	4.530	4.360	12.200	5.420	29.800	19.400	27.500	6.090	5.490	10.000	4.480
5	2.600	4.530	4.360	10.500	5.420	29.500	19.100	24.200	6.090	5.490	10.000	4.480
6	2.700	5.950	3.500	9.260	8.860	29.800	16.300	36.000	12.200	5.820	6.300	4.160
7	2.700	5.950	3.500	7.820	8.860	28.900	15.900	58.200	12.200	5.820	6.300	4.160
8	2.700	5.950	3.500	8.400	8.860	29.300	13.700	66.400	12.200	5.820	6.300	4.160
9	2.700	5.950	3.500	8.290	8.860	42.400	12.000	47.000	12.200	5.820	6.300	4.160
10	2.700	5.950	3.500	6.730	8.860	46.800	10.600	32.500	12.200	5.820	6.300	4.160
11	3.380	10.000	5.510	7.020	9.490	33.500	18.000	25.700	22.000	5.520	9.100	4.720
12	3.380	10.000	5.510	7.020	9.610	27.200	26.300	22.200	16.800	5.520	9.100	4.720
13	3.380	10.000	5.510	7.020	15.600	21.700	26.800	37.900	12.100	5.520	9.100	4.720
14	3.380	10.000	5.510	7.020	26.800	23.100	45.600	43.900	14.700	5.520	9.100	4.720
15	3.380	10.000	5.510	7.020	40.300	21.300	41.500	37.500	24.500	5.520	9.100	4.720
16	2.700	5.180	4.770	27.400	34.200	32.400	37.900	25.700	37.000	9.610	5.790	3.140
17	2.700	5.180	4.770	32.800	33.000	40.400	33.800	22.200	34.100	8.820	5.790	3.140
18	2.700	5.180	4.770	26.300	30.000	31.200	27.500	16.000	22.500	7.920	5.790	3.140
19	2.700	5.180	4.770	19.500	47.500	22.800	25.100	14.700	12.700	10.200	5.790	3.140
20	2.700	5.180	4.770	16.400	61.900	19.000	20.500	13.700	10.100	41.300	5.790	3.140
21	3.680	3.490	3.730	9.210	45.800	20.400	20.700	9.110	11.400	24.000	5.260	4.620
22	3.680	3.490	3.730	9.210	33.900	26.300	22.500	9.110	11.300	13.500	5.260	4.620
23	3.680	3.490	3.730	9.210	41.700	38.400	23.600	9.110	18.300	9.490	5.260	4.620
24	3.680	3.490	3.730	9.210	59.700	37.100	21.900	9.110	15.400	9.490	5.260	4.620
25	3.680	3.490	3.730	9.210	68.300	33.000	21.600	9.110	10.800	15.600	5.260	4.620
26	3.810	3.350	5.060	5.190	102.000	28.400	23.600	7.250	8.090	10.500	9.070	3.140
27	3.810	3.350	5.060	5.190	97.500	21.000	18.800	7.250	8.090	10.500	9.070	3.140
28	3.810	3.350	5.060	5.190	75.100	16.300	15.200	7.250	8.090	10.500	9.070	3.140
29	3.810	3.350	5.060	5.190		20.600	12.100	7.250	8.090	10.500	9.070	3.140
30	3.810	3.350	20.700	5.190		22.700	16.100	7.250	8.090	10.500	9.070	3.140
31	3.810		23.500	5.190		20.800		7.250		10.500	9.070	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE OREGON

MAJOR BASIN CALIFORNIA

MINOR BASIN KLAMATH RIVER

STATION LOCATION KLAMATH RIVER AT KENO, OREGON

78

DATE SAMPLE TAKEN MO.	DAY	YEAR	RADIOACTIVITY IN WATER: DATE OF DETERMINATION MONTH	DAY	ALPHA SUSPENDED µµc/l	ALPHA DISSOLVED µµc/l	ALPHA TOTAL µµc/l	BETA SUSPENDED µµc/l	BETA DISSOLVED µµc/l	BETA TOTAL µµc/l
11	7	60	11	29	0	3	3	0	2	2
11	14	60	12	1	0	1	1	4	0	4
11	21	60	12	5	0	0	0	0	0	0
11	28	60	12	20	0	2	2	0	5	5
12	5	60	12	28	1	1	2	0	9	9
12	12	60	12	30	0	1	1	0	1	1
12	19	60	1	16	0	3	3	0	4	4
12	26	60	1	16	0	0	0	0	0	0
1	3	61	1	24	0	0	0	0	0	0
1	10	61	2	1	0	1	1	0	5	5
1	17	61	2	2	0	1	1	0	0	0
1	24	61	2	7	0	0	0	0	2	2
1	31	61	2	20	0	0	0	0	0	0
2	7	61	3	3	0	0	0	0	0	0
2	14	61	3	7	3	0	3	0	1	1
2	21	61	3	20	0	0	0	0	0	0
2	28	61	3	24	1	0	1	0	0	0
3	7	61	3	28	0	0	0	0	0	0
3	14	61	3	31	0	1	1	0	0	0
3	21	61	4	14	0	0	0	0	5	5
3	28	61	4	17	0	0	0	0	6	6
4	5	61	5	3	0	0	0	0	0	0
4	11	61	4	27	0	0	0	0	0	0
4	18	61	5	17	0	0	0	0	0	0
4	25	61	5	23	0	0	0	0	2	2
5	2	61	5	25	0	0	0	0	0	0
5	9	61	5	31	0	0	0	0	0	0
5	16	61	6	2	0	0	0	0	0	0
5	23	61	6	20	0	0	0	0	0	0
5	31	61	6	20	0	0	0	0	1	1
6	6	61	6	29	0	0	0	0	0	0
6	13	61	7	5	0	0	0	0	0	0
6	20	61	8	1	0	0	0	1	2	3
7	4	61	8	3	0	0	0	0	0	0
7	26	61	9	1	0	0	0	4	0	4
8	1	61	9	8	0	0	0	11	0	11
8	8	61	9	13	0	0	0	5	1	6
8	15	61	9	26	0	0	0	0	0	0
8	29	61	10	3	0	0	0	2	2	4

RADIOACTIVITY IN PLANKTON (dry): DATE OF DETERMINATION MO.	DAY	GROSS ACTIVITY ALPHA µµc/g	GROSS ACTIVITY BETA µµc/g	RADIOACTIVITY IN WATER: GROSS ACTIVITY SUSPENDED µµc/l	DISSOLVED µµc/l	TOTAL µµc/l

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE OREGON

MAJOR BASIN CALIFORNIA

MINOR BASIN KLAMATH RIVER

STATION LOCATION KLAMATH RIVER AT KENO, OREGON

78

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER										RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA					DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL					ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l			MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
9	5	61	1	6	0	0	0	0	1	1										
9	12	61	10	23	0	0	0	7	3	10										
9	19	61	10	5	0	0	0	0	4	4										
9	27	61	10	13	0	0	0	0	7	7										

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE OREGON

MAJOR BASIN CALIFORNIA

MINOR BASIN KLAMATH RIVER

STATION LOCATION KLAMATH RIVER AT KENO, OREGON

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)											MICROINVERTEBRATES				
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE	OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	DOMINANT GENERA (See Introduction for Identification)
11	7	60	1500			290		130	180	710	200	700	700	46	20	82	20	84	10	97	10	40	20	10	4				--9--
12	5	60	66000	40	350	180		40		64590	750	5100	1540	82	70	46	10	56	10	97	*	20	20	20	29	4			--9-6
12	19	60	91500		50			50	450	75500	15460	16170	4200	82	50	46	10	56	10	84	*	30	20	30	23	24	1		7-953
1	5	61	40200		20	110		90	250	39590	110	13900	3420	82	80	46	*	84	*	56	*	10		20	62	39	1		--9-1
1	17	61	33700	50						33510	130	7280	560	82	80	46	10	84	*	97	*	10	50	20	43	25			--9--
2	7	61	38200			50		40		37900	200	14490	2350	82	70	46	20	81	*			10		30	113	40	2		--9-6
2	21	61	21900	90		20		510	20	20330	890	9940	8490	49	40	82	30	83	10	81	*	20		10	48	2			-19-6
3	7	61	14500					420	20	13270	740	11690	7600	49	40	82	40	81	10	84	*	10		10	87	20			-19-6
3	21	61	27900			290		820	50	24780	1300	11930	13920	82	50	48	20	46	20	81	*	10		10	94	27			-19-6
4	5	61	173500	20		110		240	70	171010	2000	29170	4950	82	70	49	10	81	10	83	*	20	110	10	182	31			--9-6
4	18	61	4900			270		330		3130	1140	4390	2110	82	50	49	20	81	10	45	10	30			14				-1966
5	2	61	5800	20		560		210		3890	1160	3270	2010	82	60	92	*	84	*	49	*	30		30	10				7-963
5	16	61	6500	100		370		190		4100	1740	3250	2030	81	40	49	10	45	*	82	*	50		20	20		1		--966
6	6	61	1400	20	20	20		20		940	380	670	1500	82	30	49	20	45	10	70	10	40			30				--9--
6	20	61	5000	190	100	270		580		2770	1120	1780	850	82	40	59	10	56	10	49	10	40			10		1		7-967
7	4	61	9400	810	20	350		120		7080	1040	1950	1860	26	20	49	20	82	10	76	10	40			199	22			489-6
7	26	61	700	470		70		20		70	110	540	980	49	20	82	20	46	10	76	10	50		10	999	2	1	2	--3--
8	8	61	3600	1470	80	210		130		500	1180	290	370	76	20	16	10	49	10	82	10	50			505	26	1	1	--3-3
8	28	61	13000	830	40	1040		1620		8180	1280	2050	700	82	50	49	10	92	10	46	*	40			342	16	2		41932
9	5	61	10800	4220	1590	850		770		2280	1080	990	1260	82	20	46	10	26	10	16	10	50			229	11			243-3
9	19	61	8200	5340	80	1700		310		290	480	190	580	46	10	82	10	76	10	92	10	50	3490	10	22			1	-8335

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE OREGON
MAJOR BASIN CALIFORNIA
MINOR BASIN KLAMATH RIVER
STATION LOCATION KLAMATH RIVER AT KENO, OREGON

78

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
1	3	61	1	15	5037	229	125	104	6	29	29	1	1	27	0	16	11	3	31
4	5	61	4	14	5525	180	80	100	5	22	19	1	1	16	2	9	8	1	16
5	2	61	5	11	6009	145	44	101	1	12	14	1	0	11	2	5	3	1	8
6	8	61	6	16	5357	174	87	87	4	22	30	2	2	23	3	10	8	2	11
9	12	61	9	21	6091	182	78	104	3	21	20	3	1	15	1	9	9	2	14

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE OREGON
MAJOR BASIN CALIFORNIA
MINOR BASIN KLAMATH RIVER
STATION LOCATION KLAMATH RIVER AT KENO, OREGON

78

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
4	5	61	13.0	8.7	7.2	5.0	-	-	-	-	6	74	94	-	80	-	-	-	-
5	2	61	14.0	9.3	7.8	4.3	-	-	-	-	7	70	82	-	26	-	-	-	-
9	12	61	17.0	8.0	8.6	7.4	-	-	-	-	5	66	46	-	44	-	-	-	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station below Big Bend powerplant
near Keno, Oregon
Operated by U.S. Geological Survey

STATE Oregon

MAJOR BASIN California

MINOR BASIN Klamath River

STATION LOCATION Klamath River at Keno, Oregon

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	1.090	1.420	2.140	1.520	1.710	1.720	1.590	1.340	1.610	.891	.954	1.220
2	.762	1.550	2.390	1.660	1.410	1.600	1.190	1.470	1.430	.798	.952	.972
3	1.510	1.460	2.230	2.030	1.470	1.910	1.730	1.520	1.240	.818	.950	.812
4	1.460	1.710	1.990	1.930	1.390	1.510	1.790	1.580	.940	.798	.935	.790
5	1.490	1.250	2.480	1.700	1.100	.557	1.910	1.450	1.400	.957	.798	1.280
6	1.400	1.140	2.390	1.370	1.470	1.310	1.730	1.180	1.370	.940	.798	1.480
7	1.360	1.570	2.280	1.470	1.580	1.900	1.780	.984	1.380	.836	.965	1.260
8	1.180	1.560	2.310	1.010	1.540	1.950	1.710	1.460	1.360	.798	.950	1.270
9	.880	1.620	2.370	1.570	1.500	1.780	1.200	1.440	1.410	.790	.938	.944
10	1.470	1.510	2.260	1.580	1.450	1.650	1.810	1.470	1.000	.908	.938	.850
11	1.540	1.510	2.090	1.760	.882	1.660	1.800	1.490	.934	.936	.928	1.370
12	1.400	1.270	2.360	1.610	1.090	1.110	1.980	1.600	1.420	.924	.798	1.360
13	1.470	1.220	2.480	1.710	1.500	1.990	1.650	1.210	1.320	.932	.790	1.330
14	1.530	1.500	2.440	1.590	1.540	1.920	1.570	.900	1.170	1.020	1.020	1.320
15	1.200	1.510	2.500	1.570	1.440	1.860	1.540	1.500	1.270	.783	.966	1.280
16	.961	1.560	2.460	1.840	1.480	1.720	1.210	1.440	1.450	.783	.945	.970
17	1.470	1.570	2.290	1.820	1.710	1.740	1.700	1.460	.998	.918	1.110	.790
18	1.500	1.510	2.090	1.980	1.500	1.460	1.700	1.450	.904	.946	1.010	1.420
19	1.180	1.430	2.540	1.860	1.260	1.610	1.470	1.730	1.180	.948	.798	1.450
20	1.840	1.180	2.550	2.000	1.420	1.670	1.470	1.470	1.210	.986	.805	1.550
21	1.610	1.620	2.530	1.730	1.670	1.680	1.540	.742	1.200	.980	.976	1.470
22	1.200	1.610	2.340	1.860	1.770	1.820	1.270	1.390	1.200	.805	.970	1.450
23	.954	1.610	2.160	2.010	1.560	1.740	1.080	1.410	1.470	.798	.974	1.360
24	1.540	1.320	2.210	2.050	1.520	1.700	1.720	1.360	.842	.934	.966	1.040
25	1.540	1.600	2.060	2.020	1.560	1.630	1.770	1.340	.885	.945	1.050	1.510
26	1.520	1.330	1.930	1.680	1.220	1.210	1.490	1.460	1.260	.976	.908	1.560
27	1.440	1.210	2.230	1.980	1.680	1.890	1.330	1.170	1.240	.951	.864	1.650
28	1.430	1.720	2.130	1.820	1.630	1.810	1.360	1.000	1.220	.984	1.150	1.620
29	1.130	2.440	1.810	1.630		1.690	1.210	1.380	1.410	.798	1.170	1.500
30	1.190	2.270	1.850	2.140		1.690	1.120	1.170	1.410	.798	1.230	1.220
31	1.620		1.750	1.790		1.480		1.340		.956	1.290	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE OHIO
MAJOR BASIN OHIO RIVER
MINOR BASIN LITTLE MIAMI RIVER
STATION LOCATION LITTLE MIAMI RIVER AT
CINCINNATI, OHIO 90

DATE SAMPLE TAKEN			DATE OF DETERMINATION (Radioactivity in Water)		RADIOACTIVITY IN WATER – ALPHA			RADIOACTIVITY IN WATER – BETA			RADIOACTIVITY IN PLANKTON (dry) – DATE OF DETERMINATION		RADIOACTIVITY IN PLANKTON (dry) – GROSS ACTIVITY		RADIOACTIVITY IN WATER – GROSS ACTIVITY		
MO.	DAY	YEAR	MONTH	DAY	SUSPENDED µµc/l	DISSOLVED µµc/l	TOTAL µµc/l	SUSPENDED µµc/l	DISSOLVED µµc/l	TOTAL µµc/l	MO.	DAY	ALPHA µµc/g	BETA µµc/g	SUSPENDED µµc/l	DISSOLVED µµc/l	TOTAL µµc/l
10	4	60	10	17	0	2	2	0	0	0							
10	11	60	10	17	0	4	4	5	1	6							
10	18	60	11	2	1	6	7	0	0	0							
11	8	60	11	18	0	2	2	0	0	0							
11	22	60	11	29	0	3	3	0	1	1							
11	29	60	12	5	0	1	1	0	0	0							
12	6	60	12	15	0	3	3	0	10	10							
12	13	60	12	27	0	3	3	0	7	7							
12	20	60	1	10	0	2	2	0	0	0							
12	27	60	1	6	0	1	1	0	0	0							
1	3	61	1	18	1	1	2	0	0	0							
1	10	61	1	24	0	0	0	0	5	5							
1	17	61	2	2	4	3	7	0	0	0							
1	24	61	2	1	1	3	4	0	0	0							
1	31	61	2	15	0	0	0	0	0	0							
2	7	61	2	20	0	1	1	0	0	0							
2	14	61	2	27	3	0	3	4	0	4							
2	23	61	3	7	1	0	1	0	1	1							
2	28	61	3	13	1	0	1	0	0	0							
3	7	61	3	23	4	0	4	0	0	0							
3	14	61	3	29	1	0	1	4	0	4							
3	21	61	4	3	2	0	2	0	0	0							
3	28	61	4	13	0	0	0	0	0	0							
4	4	61	4	14	0	0	0	0	0	0							
4	11	61	4	24	2	0	2	0	0	0							
4	18	61	5	4	2	1	3	0	0	0							
4	25	61	5	11	1	1	2	0	0	0							
5	9	61	6	8	9	0	9	0	5	5							
5	16	61	5	31	0	1	1	0	0	0							
5	23	61	6	8	0	0	0	0	0	0							
5	31	61	6	13	0	1	1	0	0	0							
6	6	61	6	16	0	0	0	0	0	0							
6	13	61	6	29	0	0	0	0	2	2							
6	20	61	7	25	1	1	2	0	0	0							
6	27	61	7	26	1	0	1	0	0	0							
7	3	61	7	31	0	0	0	0	0	0							
7	11	61	8	4	1	0	1	0	0	0							
7	25	61	8	18	1	1	2	0	1	1							
8	1	61	8	23	1	0	1	5	10	15							
8	8	61	9	8	1	0	1	2	9	11							

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE OHIO

MAJOR BASIN OHIO RIVER

MINOR BASIN LITTLE MIAMI RIVER

STATION LOCATION LITTLE MIAMI RIVER AT CINCINNATI, OHIO

90

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	MO.	DAY	$\mu\mu c/g$	$\mu\mu c/g$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$
8	15	61	9	21	1	1	2	0	0	0							
8	22	61	9	25	0	0	0	0	2	2							
8	28	61	9	27	0	1	1	0	19	19							
9	5	61	9	28	0	0	0	0	5	5							
9	12	61	10	6	1	1	2	2	8	10							
9	19	61	10	18	0	1	1	0	7	7							
9	26	61	10	4	0	0	0	0	6	6							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE OHIO
MAJOR BASIN OHIO RIVER
MINOR BASIN LITTLE MIAMI RIVER
STATION LOCATION LITTLE MIAMI RIVER AT CINCINNATI, OHIO

90

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	4	60	3900		20	110		930	200	2530	160	500	40	82	80	26	10	70	10	2	*		180		113				42933
10	25	60	5000		70	160	20	860	50	3680	160	860	90	82	60	26	20	23	10	27	10	10	40						4193-
11	1	60	2600			50		600		1740	220	350	110	82	70	64	10	26	10	23	*	10		20	5				4-9-7
11	15	60	1800	20		130		200	50	750	660	460	350	36	60	82	10	64	10	26	10	20	180	20					4-94-
11	29	60	3700		20	20		1030		1410	1230	400	1450	36	70	26	10	82	10	64	*	20	40	10	3				4194-
12	13	60	5800					160		5520	90	180	90	82	60	36	20	27	10	64	*	20			24	1	1		4-9--
12	17	60	1100			360		20		200	470	110	310	36	50	82	10	64	10	26	10	30			3		1		---4-
1	17	61	1000		20					20	920	90	960	36	10	70	10	51	10	45	10	70	70				6		---6-
2	7	61	300							50	220		70	36	20	51	20	45	10	92	10	50							-----
2	23	61	500					20		90	400	20	250	35	30	92	20	51	10	76	10	30	20						-----
3	7	61	500					40	20	20	450	50	340	92	20	51	10	70	10	71	10	60							-----
3	21	61	300							20	290	50	270	52	10	46	10	86	10	51	10	60	20				3		-----
4	4	61	100			20		70			50	20	50	82	20	26	10	86	10	51	10	60	20		7				-----
4	18	61	2900			60		80		1410	1390	680	540	51	10	86	10	92	10	82	10	60			3		2		4-973
5	2	61	4900					100		4490	270	60	210	82	80	86	*	70	*	65	*	20							--9--
5	16	61	1400			20		60	40	390	870	20	120	92	10	86	10	65	10	51	10	60			2	4	3		--963
6	6	61	3400	20		170		290		2260	680	390	80	82	40	26	20	92	10	89	10	20		10	281	10	5		4-97-
6	20	61	700			40		270		70	290		250	92	20	71	10	86	10	65	10	60			11				-----
7	3	61	8700	20		1970		2590	60	3060	1010	540	120	27	60	26	30	82	10	23	*	*		20	222				4-833
7	18	61	600	40		90		70		160	200	270	490										70		7		1		-----
8	8	61	500			20		40		100	290	40	40	92	10	71	10	26	10	54	*	70			8	1	1		-----
8	22	61	14500	150		480		2490	20	8240	3170	350	170	27	30	92	20	26	10	62	10	40		10	7	2			74937
9	5	61	1800			130		250		1040	350	600	290	23	30	26	30	32	10	82	10	30	100		16	7	3	1	4----
9	19	61	9500		80	1260		810		6710	660	440	190	23	40	82	20	26	20	27	10	10	120		11		3		4-937

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE OHIO

MAJOR BASIN OHIO RIVER

MINOR BASIN LITTLE MIAMI RIVER

STATION LOCATION LITTLE MIAMI RIVER AT CINCINNATI, OHIO

90

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	4	60	10	27	5249	316	108	208	2	18	46	6	3	34	3	21	9	3	9
11	1	60	11	19	5557	247	72	175	1	12	35	8	4	22	1	8	4	1	11
3	1	61	3	19	5051	186	45	141	0	7	20	2	2	15	1	5	2	1	10
4	4	61	4	25	2628	224	81	143	2	17	29	6	3	18	2	10	6	1	16
5	23	61	6	6	5152	255	100	155	2	20	41	6	4	29	2	15	8	2	12
6	7	61	7	6	5004	243	94	149	2	18	39	6	3	30	0	15	9	2	9
7	7	61	8	3	4999	330	154	176	5	26	65	16	9	39	1	26	17	3	12
8	3	61	8	28	5030	168	64	104	1	12	24	4	3	16	1	9	6	1	11
9	5	61	10	2	4975	270	94	176	2	12	45	8	5	28	4	16	7	2	10

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE OHIO

MAJOR BASIN OHIO RIVER

MINOR BASIN LITTLE MIAMI RIVER

STATION LOCATION LITTLE MIAMI RIVER AT CINCINNATI, OHIO 90

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	4	60	20.0	.2	7.8	1.0	14	2.5	6.4	.6	27	193	334	17	5	52	.6	390	-
10	11	60	19.0	.1	7.8	3.0	16	2.4	6.3	.4	24	261	297	20	12	49	1.0	365	-
10	18	60	19.8	-	8.1	4.8	15	3.3	7.1	1.0	28	268	319	17	-	61	.5	386	-
10	25	60	14.8	6.6	8.2	1.0	9	1.3	3.5	.1	29	267	314	15	7	53	.8	402	-
11	1	60	15.0	4.5	8.0	1.6	9	1.8	4.1	.0	35	268	322	15	11	55	1.8	-	-
11	8	60	-	1.1	8.1	1.1	9	1.2	3.1	.7	28	272	334	17	-	54	1.5	391	-
11	15	60	15.0	8.9	8.3	1.7	12	2.8	7.1	.5	21	188	238	22	10	45	1.0	275	-
11	22	60	10.6	9.9	8.5	1.1	8	1.8	4.9	.4	25	236	298	17	20	52	.8	378	-
11	29	60	12.0	5.5	8.2	4.4	17	2.1	8.8	.4	25	208	266	20	35	53	1.0	350	-
12	6	60	8.5	11.0	8.2	1.3	9	2.1	8.8	.4	25	208	266	20	16	53	1.0	392	-
12	13	60	-	13.9	8.3	1.9	16	2.8	6.7	.4	30	244	324	12	-	57	.9	403	-
12	20	60	-	11.3	8.4	1.6	15	2.9	5.9	.4	27	264	334	10	-	74	.9	424	-
12	27	60	-	13.2	8.4	1.4	13	3.4	8.7	.7	40	250	323	12	-	65	1.0	463	-
1	3	61	-	13.3	8.3	1.4	14	3.6	6.4	.4	32	222	298	18	-	61	1.0	385	-
1	10	61	-	13.6	8.0	2.8	20	1.6	3.9	.9	25	143	198	35	-	62	.8	293	-
1	17	61	-	12.2	8.1	5.1	37	1.5	4.0	.7	16	86	146	40	-	62	.7	208	-
1	24	61	-	13.2	8.1	1.8	12	.5	1.6	.7	38	192	264	20	-	76	.7	364	-
1	31	61	-	13.4	8.2	1.7	10	.8	2.7	1.4	34	259	345	15	-	78	1.0	429	-
2	7	61	-	13.2	8.0	2.1	9	.8	2.1	.9	39	278	352	12	-	79	1.3	457	-
2	14	61	-	13.4	8.0	3.6	27	.3	2.5	1.0	21	118	173	20	-	59	.5	224	-
2	23	61	-	9.8	8.2	2.3	22	2.6	6.4	.5	19	128	201	32	-	72	.5	291	-
2	28	61	7.0	10.2	8.1	1.9	23	3.4	7.0	.5	17	103	167	30	90	49	.3	233	-
3	7	61	11.0	8.0	7.9	2.6	31	4.2	8.2	.9	10	86	132	48	210	37	.3	184	-
3	14	61	10.5	8.0	8.0	1.6	21	3.0	7.0	.4	12	125	197	25	200	49	.3	254	-
3	21	61	10.0	8.6	8.1	3.2	29	3.3	7.7	.5	14	145	217	12	225	50	.4	272	-
3	28	61	10.0	2.3	7.9	.3	10	1.6	3.4	.3	18	196	278	10	10	60	.3	346	-
4	4	61	10.0	6.6	8.1	.4	13	1.3	4.2	.4	17	179	248	8	10	49	.3	311	-
4	11	61	-	10.9	8.2	2.9	24	2.6	8.2	.5	12	124	183	33	-	59	.3	237	-
4	18	61	-	13.2	8.2	2.0	28	1.7	8.7	.4	10	116	183	21	-	42	.3	229	-
5	2	61	-	10.1	8.2	1.6	14	1.8	4.7	.6	14	200	276	8	-	57	.2	348	-
5	9	61	-	8.4	8.0	2.3	54	1.8	3.5	.6	7	74	83	35	-	10	.3	117	-
5	16	61	-	8.3	8.2	1.7	16	2.5	5.6	.6	14	219	292	7	-	54	.6	355	-
5	23	61	15.5	7.8	8.4	1.5	16	1.8	4.6	.4	16	238	311	5	20	57	.5	384	-
5	31	61	17.5	6.8	8.3	2.0	14	1.6	4.3	.5	16	240	314	5	7	55	.6	387	-
6	6	61	20.5	3.8	8.0	.1	5	1.5	3.4	.6	18	250	308	0	3	52	.4	380	-
6	13	61	-	4.4	8.3	1.0	10	1.8	4.7	.5	13	184	246	0	-	37	.3	322	-
6	20	61	-	7.2	8.1	1.9	13	.5	5.8	.8	16	244	313	5	-	46	.7	397	-
6	27	61	20.1	11.3	8.4	3.9	12	2.8	7.7	.4	23	239	296	8	36	38	.3	354	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE OHIO

MAJOR BASIN OHIO RIVER

MINOR BASIN LITTLE MIAMI RIVER

STATION LOCATION LITTLE MIAMI RIVER AT CINCINNATI, OHIO

90

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
7	5	61	22.8	2.8	8.0	2.2	11	3.2	5.6	1.0	18	188	296	12	42	36	.4	312	-
7	11	61	22.7	4.6	8.3	.6	12	1.8	4.4	.5	15	202	312	8	19	30	.6	352	-
7	18	61	22.6	4.1	8.2	1.1	19	2.6	7.4	.6	12	146	256	10	117	25	.6	269	-
7	25	61	24.5	2.2	8.2	1.8	19	2.2	5.1	1.0	17	170	285	12	98	28	.9	302	-
8	1	61	24.9	12.0	7.9	.9	13	.5	2.6	.5	31	47	192	0	510	96	.1	270	-
8	8	61	-	-	8.1	-	-	-	-	-	13	138	184	20	37	35	.2	208	-
8	15	61	-	-	8.5	-	-	-	-	-	12	192	256	20	0	45	.2	275	-
8	22	61	-	-	8.4	-	-	-	-	-	16	256	320	5	0	55	.3	355	-
8	28	61	-	-	7.2	-	-	-	-	-	19	212	268	5	0	-	.0	318	-
9	19	61	-	3.1	-	2.8	-	2.5	5.4	-	-	-	-	-	-	-	-	-	-
9	27	61	-	.7	-	2.4	-	1.2	8.9	-	-	-	-	-	-	-	-	-	-

665709 O - 62 - 16

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Milford, Ohio
Operated by U.S. Geological Survey

STATE Ohio

MAJOR BASIN Ohio River

MINOR BASIN Little Miami River

STATION LOCATION Little Miami River at Cincinnati, Ohio

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	.066	.092	.116	.130	.138	4.260	1.070	1.600	.434	.320	4.690	.267
2	.066	.090	.109	.127	.130	2.910	1.250	1.360	.473	.305	4.120	.310
3	.066	.090	.102	.123	.138	2.000	1.120	1.160	.687	.290	4.050	.310
4	.063	.087	.098	.116	.130	2.320	1.010	1.020	.670	.295	1.490	.254
5	.078	.087	.098	.116	.130	7.520	.944	.965	.506	.325	.958	.232
6	.092	.102	.102	.120	.130	9.310	.881	1.410	.572	1.020	2.910	.240
7	.073	.195	.109	.234	.130	5.370	.821	11.900	1.620	1.250	1.130	2.380
8	.073	.225	.109	.548	.134	5.640	.776	26.900	1.130	.724	.718	.902
9	.087	.292	.120	.399	.138	5.340	.847	30.800	2.380	.534	.544	.534
10	.078	.335	.109	.311	.142	3.230	2.280	8.220	4.730	.424	.517	.375
11	.078	.297	.123	.288	.146	2.310	2.010	4.240	2.780	.370	2.180	.310
12	.070	.178	.150	.269	.166	1.840	2.430	2.920	1.570	.350	5.410	.262
13	.068	.134	.123	.256	.427	3.840	6.590	2.280	1.130	.330	2.460	.240
14	.068	.116	.109	.195	1.440	5.820	3.790	1.840	5.990	1.100	1.400	.216
15	.063	.105	.109	1.150	.972	3.300	2.470	1.560	5.380	1.860	.986	.196
16	.063	.112	.109	1.670	.667	2.360	5.180	1.400	2.250	1.320	.756	.184
17	.063	.105	.105	.754	.581	1.780	4.420	1.150	1.460	.718	.622	.184
18	.063	.102	.095	.570	1.770	1.500	3.890	1.080	1.090	.937	.522	.172
19	.073	.105	.095	.526	1.690	2.340	2.870	1.040	.888	.730	.456	.160
20	.105	.098	.098	.467	.964	2.040	2.190	.916	.756	.598	.407	.160
21	.090	.098	.112	.359	.654	5.050	1.800	.834	.682	.822	.365	.160
22	.081	.098	.102	.229	.660	5.210	1.890	.814	.634	2.750	.340	.150
23	.081	.109	.102	.234	1.200	5.600	1.830	.769	.574	1.230	.365	.150
24	.076	.109	.098	.216	.878	3.860	1.800	.694	.522	.888	.385	.150
25	.076	.112	.098	.174	6.900	2.700	5.510	.640	.473	.676	.396	.146
26	.070	.112	.116	.162	6.960	2.110	14.700	.610	.434	.580	.385	.142
27	.070	.105	.247	.154	4.370	1.770	5.680	.580	.402	.451	.350	.164
28	.078	.102	.195	.138	3.080	1.530	3.130	.544	.380	.375	.310	.132
29	.078	.134	.166	.142		1.300	2.390	.522	.355	.335	.276	.128
30	.076	.123	.150	.142		1.140	1.900	.495	.340	.458	.258	.125
31	.076		.130	.138		1.050		.462		4.270	.244	

RADIOACTIVITY DETERMINATIONS

STATE MASSACHUSETTS
MAJOR BASIN NORTHEAST
MINOR BASIN MERRIMACK RIVER
STATION LOCATION MERRIMACK RIVER ABOVE LOWELL, MASSACHUSETTS

19

DATE SAMPLE TAKEN			DATE OF DETERMI-NATION		RADIOACTIVITY IN WATER							RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
					ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
6	27	61	8	2	0	0	0	0	0	0									
8	2	61*	8	29	0	0	0	1	0	1									
8	22	61*	9	25	1	0	1	31	27	58									
9	7	61	10	5	-	-	-	0	11	11									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE MASSACHUSETTS
MAJOR BASIN NORTHEAST
MINOR BASIN MERRIMACK RIVER
STATION LOCATION MERRIMACK RIVER ABOVE LOWELL, MASSACHUSETTS

19

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
6	27	61	6600	370	290	2070		2300	60	520	990	100	190	9	50	2	10	56	10	47	10	40			120	23	4		3833-
7	17	61	5200	120	330	2650		660	60	580	750	250	410	56	30	47	20	93	10	9	*	50		30	211	8	2		-8-27
8	7	61	7000		80	5840		430		390	250	20	150	56	60	92	10	2	*	43	*	30		30	196	8	6		----7
8	22	61	11300	100	60	9360		620	150	350	640	40	520										20	10	48	2	9		48-37
9	7	61	1200	20	20	720		190	20	120	80	20	170	56	30	92	10	28	10	47	10	50		10	155	7	2		-8---

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE MASSACHUSETTS

MAJOR BASIN NORTHEAST

MINOR BASIN MERRIMACK RIVER

STATION LOCATION MERRIMACK RIVER ABOVE LOWELL, MASSACHUSETTS

19

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
6	26	61	8	17	5590	315	152	163	5	27	62	9	5	45	3	18	14	3	23

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MASSACHUSETTS
MAJOR BASIN NORTHEAST
MINOR BASIN MERRIMACK RIVER
STATION LOCATION MERRIMACK RIVER ABOVE LOWELL, MASSACHUSETTS

19

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
6	27	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17000
7	10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1600
7	17	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5600
7	24	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3700
8	2	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6000
8	10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2000
8	17	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1800
9	5	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	920

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station below Concord River at Lowell, Massachusetts
Operated by U.S. Geological Survey

STATE Massachusetts

MAJOR BASIN Northeast

MINOR BASIN Merrimack River

STATION LOCATION Merrimack River above Lowell, Massachusetts

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	4.850	6.930	10.400	4.100	3.270	16.400	20.000	20.000	7.900	2.290	3.030	2.900
2	4.590	10.600	10.900	4.300	3.200	15.100	21.000	18.500	7.230	1.820	2.940	2.300
3	4.890	13.400	9.000	4.500	3.200	13.800	22.000	20.000	6.930	2.260	2.710	2.100
4	4.850	13.700	7.120	4.400	3.100	13.200	20.000	20.500	7.000	2.880	2.740	2.000
5	4.210	11.400	6.260	4.300	2.900	13.000	17.000	17.400	6.590	3.330	2.060	1.900
6	4.080	9.330	6.370	4.100	3.000	13.400	16.500	15.100	5.910	3.030	.523	1.700
7	3.580	8.300	6.120	3.700	2.900	14.100	17.000	13.400	5.230	2.600	1.940	1.500
8	3.330	7.420	5.940	3.300	2.940	14.200	17.000	12.800	4.270	2.210	2.060	2.000
9	2.610	7.120	5.600	3.800	3.000	13.800	16.500	13.000	4.170	2.140	2.110	1.600
10	3.000	6.850	4.950	3.900	3.700	12.700	16.000	13.900	4.790	2.970	2.080	1.300
11	3.030	6.930	4.370	3.800	3.480	12.100	17.000	15.100	6.660	2.880	1.980	1.700
12	3.120	7.040	4.600	4.000	2.830	11.700	18.000	15.000	8.060	2.770	1.730	1.800
13	3.390	6.160	3.700	3.900	3.420	10.900	18.500	13.100	7.000	2.970	1.320	1.700
14	3.060	6.080	3.700	3.700	3.270	10.300	20.000	12.400	6.300	2.690	1.780	1.800
15	2.370	6.300	4.500	3.100	3.480	9.630	20.500	13.000	5.980	2.210	1.780	2.000
16	2.160	6.080	5.000	3.500	3.760	9.880	21.000	12.700	5.700	1.750	1.520	1.900
17	2.700	5.940	6.200	3.600	3.860	9.710	25.000	11.900	5.060	3.100	1.560	1.500
18	3.090	5.530	6.800	3.550	3.120	8.960	26.000	11.100	4.240	3.700	1.580	2.300
19	3.520	5.190	5.000	3.700	3.120	8.830	29.000	10.000	4.920	3.860	1.320	2.300
20	4.210	5.190	4.700	3.760	4.240	8.380	27.000	8.870	4.240	3.520	.977	2.100
21	5.770	5.090	4.800	3.640	4.820	8.140	24.000	7.540	3.950	3.180	1.500	4.000
22	6.810	5.260	5.200	2.970	5.840	8.100	21.500	7.460	3.830	2.660	1.520	5.200
23	5.840	5.060	5.400	3.600	6.160	8.020	21.000	7.380	3.890	2.180	1.600	4.000
24	6.230	4.270	4.900	3.600	6.960	8.300	22.500	7.740	4.920	3.310	1.800	3.600
25	8.100	4.920	4.700	3.500	7.780	8.870	28.500	7.980	4.850	3.240	1.600	4.200
26	12.300	4.530	4.300	3.240	9.290	9.460	29.000	7.460	4.850	3.210	1.300	4.500
27	13.600	3.980	4.500	2.910	12.200	11.000	26.500	7.700	4.560	3.060	1.500	4.300
28	10.600	4.330	4.700	2.770	16.000	12.200	26.000	10.400	4.080	3.000	1.600	3.900
29	9.380	4.300	4.700	2.600		14.900	23.000	11.100	3.520	2.600	2.000	3.640
30	8.620	6.440	4.400	3.330		20.600	21.500	10.100	3.120	1.910	3.400	2.800
31	6.930		3.900	3.300		22.000		9.420		3.240	3.300	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE LOUISIANA

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER MISSISSIPPI-NATCHEZ TO GULF

STATION LOCATION MISSISSIPPI RIVER AT

NEW ORLEANS, LOUISIANA 20

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	27	60*	11	7	0	2	2	0	0	0								
12	1	60*	12	9	1	2	3	0	1	1								
12	29	60*	1	11	3	22	25	1	2	3								
1	5	61	2	23	0	0	0	4	5	9								
2	2	61*	2	15	3	1	4	2	6	8								
3	2	61*	3	16	2	0	2	1	3	3								
3	30	61*	4	11	1	0	1	9	0	9								
4	20	61*	5	17	13	0	13	22	0	22								
6	1	61*	6	9	5	1	6	5	1	6								
6	22	61*	7	27	3	0	3	6	4	10								
8	3	61*	8	28	1	0	1	0	12	12								
8	31	61*	9	22	0	0	0	4	12	16								

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE LOUISIANA

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER MISSISSIPPI NATCHEZ TO GULF

STATION LOCATION MISSISSIPPI RIVER AT NEW ORLEANS, LOUISIANA 20

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	PROTOZOA (No. per ml.)	MICROINVERTEBRATES				DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE			ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	5	60	400			50		70		180	70	130	40	58	40	26	20	56	10	57	10	20	70						-----
10	19	60	1000	70		90		290	70	470	70	200	20	57	30	58	20	26	10	82	10	30	40	10	2				----7
11	2	60	600	20		70		110	50	200	110	330	90	26	30	57	10	82	10	58	10	30	70		1				-----
11	17	60	300			40		50		90	130	360	90	92	30	82	10	26	10	58	10	20	200						-----
11	30	60	800		20	20		40		620	70	240	70	57	30	82	20	59	20	56	10	20	130	20	5				----7
12	14	60	1000		50	20		50	20	900		180	50	56	30	80	30	61	10	26	10	30	90	10	6	2			--9-7
1	4	61	1900			20		110		1680	70	1270	50	56	50	80	20	82	10	58	*	20	20				1		--9-7
1	18	61	2300			50		50		1900	270	900	200	57	20	56	20	89	20	80	10	30	20				1		--9-7
2	1	61	2900			90		20	70	2640	130	3020	160	82	40	80	30	56	20	26	*	20	20	20			1		4-9-7
2	15	61	2600			20		90	20	2320	110	3040	200	56	80	82	10	92	*	83	*	10		40					--9-7
3	2	61	800					20	20	670	70	1010	110	56	40	80	20	58	10	82	10	20	20				4		--9-7
3	15	61	800			20		110		540	160	630	290												1		3		----7
4	6	61	100							70	20	200	130														2		-----
4	19	61	600			20		150		330	60	310	100	56	20	82	20	26	10	58	10	50							-----
5	2	61	800			20		60		560	210	290	80	62	20	56	10	58	10	82	10	60							--9-7
5	17	61	600					40		440	120	190	120	92	10	58	10	56	10	82	10	60				3			--9--
6	14	61	100							110	20	70	130																-----
7	5	61	800			80		130		270	290	310	190																-----
7	19	61	800			210		80		310	210	120	60	58	20	56	20	26	10	59	10	40							--9--
8	2	61	500			170				230	120	80	80	56	60	58	20	45	10	26	*	10							----7
8	16	61	400		20	40		60		100	150	60	20																-----
9	6	61	600		20	80		20	20	410	20	100	20	58	60	56	20	26	10	92	10	10			2				-----
9	20	61	900			80		80		640	100	60	40	58	50	20	40	92	*	97	*	10							----3

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE LOUISIANA

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER MISSISSIPPI-NATCHEZ TO GULF

STATION LOCATION MISSISSIPPI RIVER AT NEW ORLEANS, LOUISIANA 20

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES					CHLOROFORM EXTRACTABLES								
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	17	60	10	24	6229	152	64	88	3	16	19	1	2	14	2	7	7	1	11
11	10	60		*	6229	135	35	100	1	8	12	0	1	9	2	4	2	1	7
11	30	60	12	7	6952	125	24	101	0	5	11	1	1	8	1	3	1	1	3
12	27	60	1	3	6229	156	38	118	1	9	14	1	2	10	1	5	2	1	6
1	23	61	1	29	6227	167	41	126	2	7	19	1	2	13	3	5	2	1	5
2	17	61	2	24	6227	147	49	98	1	11	18	1	2	14	1	7	4	1	7
3	15	61	3	22	6227	116	30	86	0	5	13	1	1	10	1	4	1	1	6
5	3	61	5	10	6229	117	53	64	2	14	13	2	1	9	1	6	5	1	12
5	30	61	6	6	6430	123	56	67	2	15	13	2	1	8	2	7	7	1	11
6	20	61	6	27	6229	122	36	86	0	8	12	2	1	9	0	5	4	1	6
7	17	61	7	24	6264	111	32	79	0	6	13	1	1	10	1	4	3	1	5
8	7	61	8	14	6227	111	42	69	2	9	12	2	1	9	0	6	4	1	8
9	5	61	9	13	7588	81	23	58	0	6	8	1	1	6	0	3	1	0	5
9	26	61	10	3	6227	105	20	85	0	4	9	1	1	7	0	3	1	1	2

*NOT GIVEN

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE LOUISIANA

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER MISSISSIPPI-NATCHEZ TO GULF

STATION LOCATION MISSISSIPPI RIVER AT NEW ORLEANS, LOUISIANA 20

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	6	60	28.0	6.0	8.2	.2	7	1.0	3.3	.1	32	127	164	15	54	54	.2	267	-
10	13	60	28.0	6.2	8.0	.2	9	1.0	2.7	.1	37	120	164	15	23	60	.2	277	2300
10	20	60	24.0	6.5	8.0	.3	11	1.0	2.9	.2	33	120	164	15	13	63	.2	278	-
10	27	60	23.0	6.7	8.1	.3	11	1.3	4.0	.2	35	128	156	15	25	55	.3	277	-
10	31	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600
11	3	60	21.0	7.1	7.9	.4	10	1.1	3.1	.2	29	128	156	15	20	58	.2	258	490
11	10	60	20.0	7.7	7.8	.2	10	1.1	3.3	.2	45	133	164	15	12	49	.2	310	-
11	17	60	16.0	7.9	8.0	.6	13	1.2	3.9	.2	40	130	164	15	215	61	.2	343	1700
12	1	60	14.0	8.4	7.9	.6	11	1.3	3.7	.2	33	114	154	15	60	58	.2	271	400
12	8	60	14.0	8.9	7.9	.6	11	1.7	3.7	.2	32	118	158	15	40	65	.1	284	330
12	15	60	9.0	9.2	7.8	.9	14	1.1	4.0	.2	31	130	160	15	40	60	.1	272	550
12	22	60	8.0	9.9	7.7	.6	14	1.1	4.0	.2	31	116	140	15	56	50	.1	248	510
12	29	60	9.0	10.4	7.9	.3	13	1.1	4.0	.2	37	108	136	15	160	45	.2	247	530
1	5	61	6.0	11.7	7.8	2.6	13	1.1	3.6	.2	35	114	144	15	54	46	.1	245	5400
1	12	61	6.0	10.5	7.7	2.1	16	1.1	4.0	.3	32	114	136	15	228	43	.2	234	630
1	19	61	6.0	10.6	7.8	1.6	13	1.0	3.2	.2	32	100	130	15	68	46	.1	237	800
1	26	61	-	10.8	8.0	.6	12	1.1	4.4	.2	40	109	150	15	38	55	.2	278	600
2	2	61	7.0	11.1	7.9	2.0	14	1.0	3.3	.2	33	105	140	15	54	49	.0	261	450
2	9	61	5.0	11.3	8.0	2.6	13	.8	3.2	.2	31	99	136	15	40	52	.0	240	300
2	16	61	7.0	10.4	7.9	2.1	12	1.0	3.2	.2	33	117	150	15	46	49	.0	257	400
2	23	61	9.0	9.4	7.8	1.6	14	1.1	3.3	.2	26	113	134	15	66	32	.0	213	700
3	2	61	11.0	8.6	8.0	1.6	22	1.1	5.7	.3	28	90	116	15	320	40	.2	216	990
3	9	61	12.0	8.1	7.7	1.4	28	1.1	5.4	.1	26	85	108	15	495	37	.1	208	930
3	16	61	12.0	8.1	7.8	1.1	24	2.0	5.7	.2	15	75	96	15	375	31	.1	169	520
3	23	61	14.0	7.7	7.4	1.4	32	.8	4.1	.1	15	77	100	15	515	30	.1	176	450
3	30	61	13.0	7.6	7.5	1.7	28	1.0	5.1	.1	12	77	100	15	455	32	.1	175	-
4	6	61	14.0	7.2	7.7	.9	21	.8	5.1	.2	16	77	100	15	355	33	.1	166	450
4	13	61	16.0	7.0	7.4	.9	26	1.0	5.1	.2	16	88	114	15	305	34	.1	182	580
4	20	61	14.0	7.7	7.4	.9	21	1.0	5.1	.1	14	87	112	15	170	32	.1	172	890
4	27	61	15.0	7.0	7.7	.5	21	1.2	5.1	.1	16	85	108	15	190	35	.1	178	2200
5	4	61	17.0	7.0	7.4	.5	17	1.0	5.1	.1	16	90	114	15	155	40	.1	185	870
5	11	61	18.0	7.0	7.8	1.0	21	.7	4.2	.1	16	90	118	15	230	41	.1	205	900
5	18	61	19.0	6.4	7.5	.7	22	.7	4.2	.1	19	92	118	15	370	45	.1	213	800
5	25	61	20.0	5.4	7.8	.7	27	.7	4.2	.1	13	86	104	15	290	31	.1	165	2000
6	1	61	21.0	5.1	7.9	.3	23	1.0	5.1	.1	11	86	102	15	225	34	.1	179	33
6	8	61	22.0	5.0	7.9	.6	23	1.7	5.1	.1	15	91	110	15	155	33	.1	200	1300
6	15	61	24.0	4.7	7.9	.5	22	1.6	4.1	.1	17	98	118	15	200	37	.1	200	4900
6	22	61	24.0	5.8	7.5	.5	19	1.0	5.1	.1	21	96	128	30	225	48	.1	240	-
6	29	61	24.0	5.9	7.8	.9	16	1.0	4.1	.1	28	93	128	15	255	57	.1	245	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE LOUISIANA

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER MISSISSIPPI-NATCHEZ TO GULF

STATION LOCATION MISSISSIPPI RIVER AT NEW ORLEANS, LOUISIANA 20

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
7	6	61	25.6	5.1	7.8	.2	26	.7	5.2	.3	19	95	122	25	225	42	.1	215	900
7	13	61	25.6	5.4	7.9	.2	33	1.3	3.1	.3	20	104	126	20	210	41	.1	206	500
7	20	61	26.7	6.1	8.0	.5	15	.9	3.4	.3	24	117	152	20	90	49	.1	226	470
7	27	61	27.2	6.0	8.0	.4	19	1.3	4.2	.3	29	119	154	15	210	53	.1	255	830
8	3	61	28.3	6.0	7.7	.2	16	1.3	4.3	.8	20	101	130	15	128	46	.1	203	1500
8	10	61	28.9	5.8	7.7	.3	17	.8	3.5	.8	25	103	138	15	120	53	.1	224	1100
8	17	61	28.9	5.7	7.9	.4	19	1.4	5.2	.8	18	96	122	20	198	39	.1	202	1300
8	24	61	28.3	6.0	7.8	.2	10	.8	4.6	.5	20	105	136	20	133	52	.1	232	*200
8	31	61	27.2	6.2	7.9	.2	10	1.0	4.6	.4	32	109	138	20	108	45	.1	245	4000
9	7	61	27.2	5.8	8.0	.1	8	1.1	3.3	.2	24	112	144	30	73	55	.2	233	19000
9	14	61	27.2	6.7	7.9	.1	5	1.1	3.2	.4	35	116	154	20	63	51	.2	277	1600
9	21	61	27.2	7.0	7.9	.4	12	1.0	4.2	.4	30	123	158	20	34	62	.2	342	830
9	28	61	26.1	5.8	7.8	.3	30	.8	4.2	.8	48	110	146	20	305	64	.1	287	3800

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Red River Landing, Louisiana
Operated by U.S. Geological Survey

STATE Louisiana

MAJOR BASIN Southwest-Lower Mississippi River

MINOR BASIN Lower Mississippi-Natchez to Gulf

STATION LOCATION Mississippi River at
New Orleans, Louisiana

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	178.000	174.000	191.000	223.000	309.000	544.000	1099.000	837.000	1035.000	532.000	403.000	205.000
2	175.000	174.000	188.000	222.000	296.000	579.000	1095.000	830.000	1034.000	510.000	414.000	203.000
3	172.000	174.000	186.000	221.000	277.000	608.000	1093.000	812.000	1028.000	482.000	420.000	203.000
4	170.000	174.000	180.000	228.000	254.000	634.000	1087.000	812.000	1017.000	450.000	419.000	202.000
5	170.000	170.000	175.000	239.000	232.000	658.000	1080.000	812.000	996.000	412.000	411.000	202.000
6	169.000	160.000	177.000	252.000	217.000	687.000	1073.000	812.000	977.000	372.000	393.000	201.000
7	171.000	155.000	182.000	274.000	210.000	707.000	1060.000	805.000	945.000	343.000	374.000	201.000
8	171.000	156.000	184.000	318.000	200.000	724.000	1055.000	788.000	908.000	321.000	362.000	200.000
9	171.000	173.000	190.000	335.000	193.000	740.000	1048.000	786.000	864.000	304.000	352.000	199.000
10	168.000	182.000	193.000	346.000	189.000	754.000	1042.000	789.000	810.000	298.000	340.000	202.000
11	167.000	190.000	204.000	354.000	186.000	768.000	1034.000	820.000	762.000	297.000	328.000	206.000
12	167.000	199.000	217.000	353.000	186.000	784.000	1007.000	848.000	715.000	301.000	320.000	198.000
13	167.000	208.000	228.000	352.000	188.000	800.000	983.000	852.000	662.000	295.000	316.000	190.000
14	174.000	213.000	236.000	349.000	191.000	815.000	968.000	853.000	620.000	289.000	314.000	208.000
15	174.000	215.000	241.000	340.000	196.000	831.000	952.000	854.000	589.000	285.000	314.000	220.000
16	174.000	215.000	248.000	325.000	201.000	846.000	938.000	874.000	562.000	279.000	314.000	228.000
17	174.000	215.000	260.000	306.000	213.000	879.000	930.000	894.000	549.000	280.000	314.000	228.000
18	172.000	215.000	272.000	289.000	239.000	911.000	925.000	902.000	540.000	289.000	310.000	223.000
19	167.000	217.000	282.000	273.000	259.000	926.000	921.000	908.000	538.000	293.000	307.000	212.000
20	161.000	221.000	286.000	261.000	274.000	939.000	916.000	926.000	541.000	297.000	306.000	208.000
21	155.000	221.000	286.000	250.000	298.000	950.000	910.000	945.000	545.000	308.000	307.000	244.000
22	150.000	220.000	280.000	242.000	331.000	960.000	902.000	960.000	540.000	325.000	308.000	277.000
23	149.000	219.000	274.000	240.000	354.000	970.000	890.000	962.000	542.000	340.000	320.000	313.000
24	149.000	216.000	265.000	245.000	372.000	985.000	880.000	963.000	560.000	347.000	320.000	348.000
25	152.000	214.000	256.000	260.000	399.000	994.000	875.000	964.000	568.000	354.000	317.000	382.000
26	155.000	211.000	246.000	278.000	425.000	1007.000	870.000	966.000	572.000	356.000	302.000	400.000
27	157.000	208.000	238.000	288.000	457.000	1021.000	863.000	984.000	580.000	357.000	280.000	410.000
28	159.000	204.000	231.000	296.000	501.000	1039.000	843.000	1002.000	579.000	357.000	254.000	408.000
29	161.000	196.000	224.000	305.000		1062.000	840.000	1018.000	575.000	357.000	232.000	398.000
30	170.000	191.000	221.000	312.000		1076.000	838.000	1027.000	569.000	368.000	218.000	382.000
31	174.000		221.000	313.000		1092.000		1035.000		383.000	209.000	

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE MISSISSIPPI
MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER
MINOR BASIN LOWER MISSISSIPPI-YAZOO RIVER
STATION LOCATION MISSISSIPPI RIVER AT
VICKSBURG, MISSISSIPPI 21

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
4	10	61	4	21	4950	188	79	109	3	20	20	2	2	16	0	8	9	1	18
5	4	61	5	25	4500	160	78	82	3	20	21	1	2	17	1	9	7	2	16
6	8	61	6	22	3580	292	151	141	3	41	35	4	2	28	1	17	20	3	32
7	10	61	7	21	5000	104	32	72	1	8	10	2	1	7	0	4	4	1	4
8	14	61	8	24	5000	131	52	79	1	13	18	3	2	13	0	6	5	1	8
9	11	61	9	22	6500	94	32	62	1	7	15	4	2	9	0	4	1	1	3

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Vicksburg, Mississippi
Operated by U.S. Geological Survey

STATE Mississippi

MAJOR BASIN Southwest-Lower Mississippi

MINOR BASIN Lower Mississippi-Yazoo Rivers

STATION LOCATION Mississippi River at Vicksburg, Mississippi

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	241.000	212.000	245.000	248.000	340.000	692.000	1.347.000	1.016.000	1.532.000	641.000	554.000	271.000
2	235.000	210.000	240.000	248.000	311.000	733.000	1.347.000	1.012.000	1.488.000	589.000	560.000	268.000
3	229.000	199.000	232.000	254.000	279.000	776.000	1.351.000	1.008.000	1.413.000	534.000	560.000	266.000
4	223.000	188.000	228.000	264.000	251.000	813.000	1.355.000	1.008.000	1.340.000	483.000	550.000	270.000
5	223.000	187.000	226.000	279.000	237.000	843.000	1.347.000	1.004.000	1.265.000	436.000	532.000	268.000
6	229.000	187.000	230.000	299.000	228.000	880.000	1.315.000	1.004.000	1.195.000	400.000	510.000	263.000
7	229.000	204.000	240.000	328.000	220.000	903.000	1.311.000	1.000.000	1.133.000	378.000	488.000	254.000
8	228.000	216.000	248.000	353.000	212.000	930.000	1.294.000	1.008.000	1.052.000	370.000	469.000	252.000
9	226.000	226.000	253.000	371.000	207.000	949.000	1.286.000	1.032.000	960.000	368.000	456.000	250.000
10	226.000	238.000	250.000	383.000	206.000	969.000	1.232.000	1.060.000	876.000	368.000	447.000	247.000
11	226.000	253.000	254.000	387.000	212.000	997.000	1.203.000	1.092.000	811.000	365.000	442.000	247.000
12	224.000	269.000	259.000	381.000	220.000	1.017.000	1.182.000	1.121.000	763.000	359.000	440.000	254.000
13	228.000	278.000	262.000	369.000	237.000	1.049.000	1.158.000	1.150.000	735.000	351.000	440.000	280.000
14	224.000	277.000	267.000	350.000	245.000	1.074.000	1.133.000	1.186.000	704.000	344.000	440.000	295.000
15	220.000	277.000	275.000	333.000	251.000	1.094.000	1.117.000	1.211.000	704.000	336.000	436.000	304.000
16	214.000	277.000	289.000	315.000	264.000	1.123.000	1.096.000	1.240.000	701.000	344.000	432.000	299.000
17	210.000	280.000	308.000	298.000	277.000	1.156.000	1.076.000	1.273.000	688.000	363.000	425.000	287.000
18	202.000	283.000	326.000	286.000	296.000	1.180.000	1.068.000	1.294.000	678.000	368.000	415.000	276.000
19	199.000	286.000	333.000	275.000	313.000	1.188.000	1.060.000	1.332.000	678.000	366.000	409.000	276.000
20	193.000	286.000	335.000	264.000	329.000	1.205.000	1.060.000	1.370.000	701.000	392.000	409.000	316.000
21	190.000	278.000	331.000	261.000	350.000	1.230.000	1.060.000	1.405.000	721.000	428.000	417.000	380.000
22	190.000	275.000	320.000	269.000	367.000	1.250.000	1.060.000	1.435.000	742.000	451.000	432.000	449.000
23	192.000	273.000	311.000	282.000	387.000	1.263.000	1.060.000	1.466.000	752.000	456.000	436.000	514.000
24	196.000	270.000	299.000	296.000	416.000	1.284.000	1.064.000	1.497.000	760.000	460.000	428.000	570.000
25	199.000	269.000	286.000	311.000	460.000	1.300.000	1.064.000	1.528.000	760.000	460.000	396.000	603.000
26	204.000	262.000	272.000	326.000	515.000	1.313.000	1.064.000	1.555.000	756.000	460.000	357.000	611.000
27	206.000	256.000	266.000	338.000	579.000	1.321.000	1.060.000	1.564.000	752.000	462.000	325.000	594.000
28	210.000	249.000	264.000	352.000	643.000	1.326.000	1.056.000	1.568.000	742.000	467.000	295.000	562.000
29	214.000	248.000	261.000	357.000		1.338.000	1.044.000	1.564.000	721.000	483.000	275.000	517.000
30	214.000	248.000	258.000	359.000		1.342.000	1.028.000	1.564.000	685.000	512.000	270.000	483.000
31	214.000		251.000	355.000		1.347.000		1.550.000		537.000	275.000	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE LOUISIANA

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER MISSISSIPPI-YAZOO RIVERS

STATION LOCATION MISSISSIPPI RIVER AT

DELTA, LOUISIANA 54

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER										RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA					DATE OF DETERMI-NATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL					ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l			MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	13	60	11	23	1	4	5	0	10	10										
11	30	60*	12	15	1	2	3	0	2	2										
12	13	60	1	18	2	2	4	0	5	5										
1	25	61*	2	21	1	1	2	0	12	12										
2	23	61*	3	23	2	0	2	0	7	7										
3	23	61*	4	24	4	1	5	9	5	14										
4	25	61*	5	10	3	1	4	2	0	2										
5	23	61*	6	23	4	1	5	4	0	4										
6	22	61*	7	26	9	2	11	1	2	3										
7	18	61*	8	28	16	0	16	35	22	57										
8	24	61*	9	22	5	0	5	23	12	35										
9	6	61	10	7	5	2	7	12	22	34										
9	20	61	10	7	-	-	-	9	13	22										

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE LOUISIANA

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER MISSISSIPPI-YAZOO RIVERS

STATION LOCATION MISSISSIPPI RIVER AT

DELTA, LOUISIANA 54

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFIERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	3	60	500			70		70		270	90	150	200	82	40	26	30	56	10	57	10	30	260						-----
11	16	60	1600			50		70		1300	180	650	200	58	20	83	10	56	10	80	10	60	200		1				--9-7
12	7	60	500		50	20			70	340		340	50	56	30	80	20	83	10	61	10	30	20		1				----6
12	14	60	1500		20	110		90		1190	110	1160	160	56	30	83	30	80	20	61	10	20	50						--9-7
1	4	61	4300					160	20	3820	250	1880	290	80	40	82	20	56	20	61	10	20	30						--9-7
1	25	61	4900			70		70		4580	200	3600	250	80	30	82	30	56	20	57	*	20	20			2			--9-7
2	7	61	5900			50		50		5670	130	3240	270	82	40	56	30	89	10	58	10	20		10			6		--9-7
2	23	61	3200			20				3020	130	2390	290	82	50	56	20	80	10	92	10	10		10					--9-7
3	8	61	2100			50		90	40	1650	220	1560	580	56	40	82	10	58	10	89	10	30							--977
3	23	61	500			70			20	310	70	470	180	82	40	57	10	56	10	26	10	40	20						--9--
4	12	61	400					90		200	70	290	70	82	40	26	10	56	10	70	10	50			4	2			-----
4	25	61	1000			40		100		390	410	250	170	82	50	56	10	57	10	26	*	30							--9--
5	10	61	300				20	70		200	50	540	290	82	20	92	20	62	10	83	10	50	20		1	2	1		-----
5	23	61	600	20	20	80				330	150	120	120	56	30	58	20	80	10	83	10	70			6	6			--9--
6	22	61	1000		20	20		80		540	330	80	20																--9-7
7	7	61	700			60		20		440	150	40	170	56	20	26	10	58	10	83	10	50							4-9--
7	18	61	1100			20		170		660	270	210	250	56	30	58	20	26	20	80	10	20							----7
8	9	61	700			100		60		230	350	170	20																-----
8	24	61	1500	20	20	60		60		990	290	120	60	58	50	56	10	26	10	92	10	20							4---7
9	5	61	1700		80	40		100		1240	230	170	40	58	80	20	10	56	*	26	*	*							----3
9	20	61	1000			40		100		580	250	20	80	58	70	56	20	47	*	92	*	10							----7

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE LOUISIANA

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER MISSISSIPPI-YAZOO RIVERS

STATION LOCATION MISSISSIPPI RIVER AT DELTA, LOUISIANA

54

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
12	13	60	12	20	4217	135	36	99	0	5	23	8	4	11	0	3	1	1	3
8	30	61	10	2	4738	92	26	66	0	3	16	2	2	12	0	4	1	0	2

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE LOUISIANA

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER MISSISSIPPI-YAZOO RIVERS

STATION LOCATION MISSISSIPPI RIVER AT

DELTA, LOUISIANA 54

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	13	60	21.1	7.8	8.1	.8	14	.6	2.4	.1	23	129	132	-	125	38	-	212	-
10	31	60	20.1	7.4	7.5	1.1	18	.8	2.7	.1	24	114	122	-	100	38	-	208	-
11	30	60	11.1	14.0	7.6	1.1	11	.6	3.2	.1	28	118	150	-	140	42	-	199	-
12	13	60	9.4	12.0	7.6	1.1	9	.8	2.8	.1	30	122	144	-	180	42	-	202	-
1	4	61	-	15.6	7.8	2.1	9	1.1	2.5	.1	34	124	164	-	75	45	-	220	-
2	7	61	3.3	5.4	7.4	1.0	14	1.1	2.0	.1	30	106	142	-	125	50	-	210	-
2	23	61	8.8	6.1	7.7	1.4	18	.8	1.9	.1	35	104	142	-	75	54	-	224	-
3	8	61	11.1	6.2	7.3	1.0	9	.4	1.4	.1	53	70	109	-	410	43	-	194	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Vicksburg, Mississippi
Operated by U.S. Geological Survey

STATE: Louisiana

MAJOR BASIN: Southwest-Lower Mississippi River

MINOR BASIN: Lower Mississippi-Yazoo Rivers

STATION LOCATION: Mississippi River at Delta, Louisiana

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	241.000	212.000	245.000	248.000	340.000	692.000	1347.000	1016.000	1532.000	641.000	554.000	271.000
2	235.000	210.000	240.000	248.000	311.000	733.000	1347.000	1012.000	1488.000	589.000	560.000	268.000
3	229.000	199.000	232.000	254.000	279.000	776.000	1351.000	1008.000	1413.000	534.000	560.000	266.000
4	223.000	188.000	228.000	264.000	251.000	813.000	1355.000	1008.000	1340.000	483.000	550.000	270.000
5	223.000	187.000	226.000	279.000	237.000	843.000	1347.000	1004.000	1265.000	436.000	532.000	268.000
6	229.000	187.000	230.000	299.000	228.000	880.000	1315.000	1004.000	1195.000	400.000	510.000	263.000
7	229.000	204.000	240.000	328.000	220.000	903.000	1311.000	1000.000	1133.000	378.000	488.000	254.000
8	228.000	216.000	248.000	353.000	212.000	930.000	1294.000	1008.000	1052.000	370.000	469.000	252.000
9	226.000	226.000	253.000	371.000	207.000	949.000	1286.000	1032.000	960.000	368.000	456.000	250.000
10	226.000	238.000	250.000	383.000	206.000	969.000	1232.000	1060.000	876.000	368.000	447.000	247.000
11	226.000	253.000	254.000	387.000	212.000	997.000	1203.000	1092.000	811.000	365.000	442.000	247.000
12	224.000	269.000	259.000	381.000	220.000	1017.000	1182.000	1121.000	763.000	359.000	440.000	254.000
13	228.000	278.000	262.000	369.000	237.000	1049.000	1158.000	1150.000	735.000	351.000	440.000	280.000
14	224.000	277.000	267.000	350.000	245.000	1074.000	1133.000	1186.000	704.000	344.000	440.000	295.000
15	220.000	277.000	275.000	333.000	251.000	1094.000	1117.000	1211.000	704.000	336.000	436.000	304.000
16	214.000	277.000	289.000	315.000	264.000	1123.000	1096.000	1240.000	701.000	344.000	432.000	299.000
17	210.000	280.000	308.000	298.000	277.000	1156.000	1076.000	1273.000	688.000	363.000	425.000	287.000
18	202.000	283.000	326.000	286.000	296.000	1180.000	1068.000	1294.000	678.000	368.000	415.000	276.000
19	199.000	286.000	333.000	275.000	313.000	1188.000	1060.000	1332.000	678.000	366.000	409.000	276.000
20	193.000	286.000	335.000	264.000	329.000	1205.000	1060.000	1370.000	701.000	392.000	409.000	316.000
21	190.000	278.000	331.000	261.000	350.000	1230.000	1060.000	1405.000	721.000	428.000	417.000	380.000
22	190.000	275.000	320.000	269.000	367.000	1250.000	1060.000	1435.000	742.000	451.000	432.000	449.000
23	192.000	273.000	311.000	282.000	387.000	1263.000	1060.000	1466.000	752.000	456.000	436.000	514.000
24	196.000	270.000	299.000	296.000	416.000	1284.000	1064.000	1497.000	760.000	460.000	428.000	570.000
25	199.000	269.000	286.000	311.000	460.000	1300.000	1064.000	1528.000	760.000	460.000	396.000	603.000
26	204.000	262.000	272.000	326.000	515.000	1313.000	1064.000	1555.000	756.000	460.000	357.000	611.000
27	206.000	256.000	266.000	338.000	579.000	1321.000	1060.000	1564.000	752.000	462.000	325.000	594.000
28	210.000	249.000	264.000	352.000	643.000	1326.000	1056.000	1568.000	742.000	467.000	295.000	562.000
29	214.000	248.000	261.000	357.000		1338.000	1044.000	1564.000	721.000	483.000	275.000	517.000
30	214.000	248.000	258.000	359.000		1342.000	1028.000	1564.000	685.000	512.000	270.000	483.000
31	214.000		251.000	355.000		1347.000		1550.000		537.000	275.000	

RADIOACTIVITY DETERMINATIONS

STATE ARKANSAS
MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER
MINOR BASIN LOWER MISSISSIPPI-CAIRO TO HELENA
STATION LOCATION MISSISSIPPI RIVER AT
WEST MEMPHIS, ARKANSAS 22

DATE SAMPLE TAKEN			DATE OF DETERMINATION		RADIOACTIVITY IN WATER						RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
					ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	10	60*	10	24	-	-	-	0	22	22							
10	24	60*	11	14	2	5	7	0	11	11							
11	7	60*	11	25	-	-	-	3	17	20							
11	28	60*	12	6	1	2	3	3	13	16							
12	12	60*	1	13	-	-	-	0	4	4							
12	27	60*	1	13	1	2	3	0	4	4							
1	9	61*	2	3	-	-	-	0	19	19							
1	30	61*	2	15	1	1	2	0	5	5							
2	13	61*	2	23	-	-	-	1	9	10							
2	27	61*	3	16	2	1	3	0	5	5							
3	13	61*	3	27	-	-	-	11	7	18							
3	20	61	5	2	7	0	7	9	0	9							
4	24	61*	5	22	1	1	2	0	0	0							
5	8	61*	5	24	-	-	-	0	0	0							
6	12	61*	6	28	-	-	-	1	2	3							
6	26	61	7	19	3	1	4	12	0	12							
7	3	61	8	2	-	-	-	4	0	4							
7	31	61*	8	30	4	1	5	18	4	22							
8	14	61*	9	15	-	-	-	26	16	42							
8	28	61*	9	22	6	1	7	0	10	10							
9	5	61	9	28	-	-	-	0	5	5							
9	11	61	10	10	-	-	-	3	22	25							
9	18	61	10	16	2	1	3	2	0	2							
9	25	61	10	2	-	-	-	0	0	0							

WATER QUALITY BASIC DATA

STATE ARKANSAS

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

PLANKTON POPULATION

MINOR BASIN LOWER MISSISSIPPI-CAIRO TO HELENA

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATION LOCATION MISSISSIPPI RIVER AT WEST MEMPHIS, ARKANSAS 22

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS														PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE							
10	3	60	1100	70		180		160	50	470	180	530		82	40	26	30	58	10	56	10	20	130	20	1	1			--9-6
10	17	60	900			50		50	20	460	290	180	200	82	10	26	10	58	10	56	10	50	40	10					-49--
11	7	60	2000	20		180		70	50	1430	290	1250	160	82	20	80	20	26	10	58	10	50	270						4-9-7
11	21	60	800			20		110	110	540	50	790	310	56	30	58	20	82	10	80	10	30	50	10	13	2	1		----7
12	5	60	1500			20		110		1270	50	1030		56	30	80	20	61	20	82	10	20		10	5				--9-7
12	19	60	4600	20		110		180	180	3870	200	2250	110	56	50	82	20	80	20	61	10	10	50	10	25				--9-7
1	3	61	4100			20		250	70	3290	470	1390	110	80	50	82	30	56	10	9	*	10		10	15				3-9-7
1	16	61	5100			70		130	20	4690	220	1120	160	80	40	82	30	56	10	89	10	10			6		2		--9-7
2	6	61	11900		20	40		70	40	11170	540	4360	160	82	70	80	10	56	10	58	*	10		20	3		2		--9-7
2	20	61	7900			20		130		7670	90	1630	70	56	40	82	20	58	10	92	60	30					2		--9-7
3	6	61	2700			20		90	20	2010	540	1360	740	56	60	92	10	58	10	47	*	20					3		4-97-
3	20	61	600			20		70		310	160	310	270											10			2		--9--
4	17	61	1700		20	40		190		1140	270	830	290	56	30	82	20	26	10	57	10	40							4-9-7
4	24	61	1100	80		40		80		480	410	250	100	82	60	86	*	70	*	56	*	40							--9--
5	1	61	500			20		70		160	220	650	130	62	20	56	10	82	10	83	10	50							-----
6	5	61	2100		20	230		190		1200	500	210	150	56	20	80	10	82	10	58	10	50							4-9-7
6	12	61	2300	20	20	330		150		1410	390	790	270	56	50	80	10	58	10	83	10	30							--9-7
6	19	61	1700			310		150		600	620	370	350	92	20	56	10	46	10	82	10	60							7-927
7	3	61	800			130		170		210	310	290	80																-----
7	17	61	800			40		20		580	170	170	40	56	60	58	10	45	10	26	*	10							----7
8	7	61	1100					20		1010	70	690	450	56	30	45	30	80	10	92	10	40							--9-7
8	21	61	1200	20		40		80		830	210	100	40	58	40	56	20	26	*	45	*	30							----7
9	5	61	2200			40		120		1780	270	230	20	58	90	56	*	20	*	26	*						2		4-9-7
9	18	61	600			40		80		370	120	40	40	56	90	58	10					*							----7

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE ARKANSAS

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER MISSISSIPPI-CAIRO TO HELENA

STATION LOCATION MISSISSIPPI RIVER AT
WEST MEMPHIS, ARKANSAS 22

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	3	60	10	10	4120	181	23	158	0	4	12	2	1	8	1	3	1	1	2
10	31	60	11	7	3760	128	31	97	0	7	14	2	2	9	1	4	2	1	3
6	5	61	6	12	1123	283	70	213	1	17	28	6	3	17	2	9	5	1	9
7	5	61	7	17	6190	102	33	69	1	7	15	5	1	8	1	4	2	1	3
8	4	61	8	14	5830	98	30	68	1	7	10	2	1	7	0	4	2	1	5
9	11	61	9	20	3900	113	31	82	0	7	13	2	1	10	0	4	2	1	4

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE ARKANSAS

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER MISSISSIPPI-CAIRO TO HELENA

STATION LOCATION MISSISSIPPI RIVER AT
WEST MEMPHIS, ARKANSAS 22

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	3	60	23.9	7.2	7.9	1.2	11	3.0	12.3	.1	14	102	136	8	15	50	–	232	100000
10	10	60	22.5	7.4	7.7	.5	18	3.2	15.5	.0	15	105	144	13	245	50	–	270	29000
10	17	60	23.8	7.3	7.9	.4	20	3.5	15.9	.2	15	112	152	15	215	51	–	250	30000
10	24	60	17.8	7.6	8.1	.3	18	2.8	13.6	.1	15	114	157	12	110	51	–	270	38000
10	31	60	16.0	8.8	8.0	.9	11	2.5	11.6	.1	16	110	158	11	20	58	–	264	–
11	7	60	15.1	8.8	7.9	–	13	2.9	9.2	.1	15	110	156	11	–	58	.1	264	13000
11	14	60	10.5	9.9	8.0	.8	20	2.8	10.6	.1	13	92	118	9	400	30	.2	188	11000
11	21	60	13.3	9.9	7.9	–	14	3.8	12.2	.1	19	102	158	13	20	68	.0	268	18000
11	28	60	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10000
12	5	60	8.8	11.1	8.0	2.7	17	2.7	12.8	.3	18	110	156	11	–	55	.1	254	18000
12	12	60	8.2	11.4	8.0	1.6	15	2.4	9.9	.3	19	114	160	13	90	49	.1	254	7000
12	19	60	4.0	12.3	8.0	1.8	15	3.9	11.5	.3	23	106	152	12	90	47	.1	266	5500
12	27	60	2.9	13.1	8.0	2.2	18	4.5	12.6	.4	25	94	160	13	85	46	.1	260	6400
1	3	61	2.2	13.2	8.0	1.1	–	3.6	10.2	.3	23	106	158	11	–	44	.1	252	6600
1	9	61	4.1	13.3	8.0	2.3	23	5.8	12.6	.4	23	94	144	11	120	48	.1	232	2800
1	16	61	4.5	12.3	8.0	–	15	5.5	13.2	.5	24	102	164	11	75	48	.5	258	3900
1	23	61	5.5	10.5	8.0	4.0	25	1.7	14.1	.3	25	94	148	9	125	49	–	244	2800
1	30	61	2.5	12.6	7.8	–	28	4.5	15.0	.5	20	84	148	11	190	51	.0	238	4800
2	6	61	4.5	13.1	7.9	2.8	18	5.0	11.4	.4	18	102	154	11	80	41	.3	244	4700
2	13	61	5.4	13.8	8.0	3.4	36	4.1	11.5	.3	16	94	128	11	230	33	.5	210	4600
2	20	61	6.7	12.7	7.9	1.6	18	4.7	13.7	.4	21	82	140	11	110	50	.1	232	4200
2	27	61	7.8	11.7	7.9	2.0	38	4.3	15.2	.3	14	66	110	14	350	30	.0	180	2500
3	6	61	9.8	10.9	7.8	1.5	42	4.6	16.3	.5	13	68	110	11	340	37	.0	176	5500
3	13	61	10.4	10.6	7.8	2.8	26	4.9	16.5	.4	8	62	96	15	260	30	.1	150	1700
3	20	61	10.2	10.1	7.6	1.4	28	5.3	18.3	.3	5	46	72	13	280	17	.0	106	8300
4	17	61	9.8	9.0	8.0	1.5	24	6.5	18.4	.4	9	64	130	17	300	39	.0	188	3400
4	24	61	12.9	10.2	8.0	1.3	23	6.6	18.7	.1	9	74	134	16	290	40	.0	196	9200
5	1	61	15.2	8.7	7.8	1.3	22	4.5	13.6	.1	9	90	148	14	320	45	.0	206	29000
5	8	61	16.6	8.9	7.8	2.0	58	3.5	10.1	.1	8	82	142	16	180	42	.0	196	25000
6	5	61	22.4	6.3	7.7	1.0	22	4.1	10.5	.1	10	106	144	16	330	42	.0	222	11000
6	12	61	25.9	–	7.8	–	16	3.5	9.5	.1	11	90	146	17	190	52	.1	228	28000
6	19	61	24.0	6.1	7.7	.7	33	3.1	8.8	.1	15	92	146	14	380	53	.1	234	50000
6	26	61	24.2	6.4	7.7	.8	41	4.2	10.9	.0	10	88	132	18	600	46	.1	208	21000
7	3	61	26.1	6.5	7.8	.4	9	3.1	–	.0	10	102	144	12	240	45	–	216	22000
7	17	61	26.6	6.5	7.8	.4	20	3.5	12.3	.0	10	109	154	12	400	36	–	244	93000
7	24	61	27.4	6.5	7.9	.6	13	2.1	6.0	.0	14	96	146	11	180	34	.1	234	28000
7	31	61	28.8	6.4	7.7	2.4	18	3.2	8.5	.2	12	92	133	12	320	40	.1	218	62000
8	7	61	29.6	5.1	7.7	1.7	16	3.5	8.0	.0	14	86	130	18	490	46	.2	208	40000
8	14	61	27.9	6.3	7.8	.6	20	3.5	9.0	.1	11	84	133	14	320	41	.2	210	12000

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE ARKANSAS
MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER
MINOR BASIN LOWER MISSISSIPPI-CAIRO TO HELENA
STATION LOCATION MISSISSIPPI RIVER AT WEST MEMPHIS, ARKANSAS 22

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
8	21	61	26.9	5.8	7.6	1.5	50	3.5	9.5	.2	13	85	136	12	800	46	.2	220	16000
8	28	61	27.1	6.5	7.8	.4	12	2.8	8.2	.2	13	105	151	11	120	45	.2	242	48000
9	5	61	28.4	5.7	8.0	.3	13	1.1	3.8	.1	16	107	156	11	70	52	.3	260	19000
9	11	61	26.8	6.0	8.0	.5	23	1.2	3.7	.1	15	106	148	8	125	51	.1	236	49000
9	18	61	24.7	7.3	8.0	1.4	19	2.8	9.1	.1	13	94	129	12	260	40	.0	202	27000
9	25	61	23.5	5.8	7.8	1.3	43	3.3	8.1	.1	8	88	113	17	600	34	.2	170	19000

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Memphis, Tennessee
Operated by U.S. Geological Survey

STATE: Arkansas

MAJOR Basin: Southwest-Lower Mississippi River

MINOR BASIN: Lower Mississippi-Cairo to Helena

STATION LOCATION: Mississippi River at West Memphis, Arkansas

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	192.000	152.000	188.000	188.000	178.000	755.000	1042.000	869.000	688.000	363.000	447.000	215.000
2	193.000	151.000	190.000	200.000	181.000	785.000	1021.000	869.000	609.000	324.000	429.000	219.000
3	192.000	158.000	199.000	226.000	185.000	819.000	1016.000	861.000	549.000	299.000	404.000	213.000
4	190.000	164.000	208.000	267.000	176.000	850.000	1016.000	858.000	503.000	288.000	382.000	206.000
5	186.000	170.000	202.000	302.000	164.000	877.000	1008.000	854.000	472.000	291.000	373.000	206.000
6	181.000	175.000	202.000	322.000	164.000	899.000	983.000	854.000	456.000	299.000	365.000	211.000
7	183.000	190.000	200.000	331.000	170.000	915.000	947.000	861.000	450.000	304.000	361.000	209.000
8	181.000	217.000	197.000	331.000	181.000	939.000	903.000	877.000	445.000	304.000	363.000	204.000
9	185.000	238.000	193.000	319.000	188.000	959.000	873.000	915.000	447.000	293.000	375.000	208.000
10	186.000	240.000	185.000	306.000	199.000	983.000	843.000	955.000	447.000	275.000	387.000	215.000
11	186.000	230.000	183.000	288.000	208.000	1012.000	823.000	1004.000	453.000	262.000	387.000	226.000
12	180.000	228.000	181.000	258.000	213.000	1047.000	819.000	1051.000	481.000	254.000	385.000	236.000
13	176.000	228.000	192.000	230.000	224.000	1091.000	809.000	1101.000	503.000	267.000	380.000	232.000
14	173.000	232.000	209.000	215.000	248.000	1137.000	802.000	1165.000	512.000	282.000	373.000	224.000
15	171.000	238.000	213.000	208.000	269.000	1175.000	826.000	1227.000	523.000	280.000	363.000	217.000
16	164.000	244.000	213.000	199.000	282.000	1203.000	850.000	1291.000	540.000	265.000	354.000	211.000
17	161.000	238.000	215.000	190.000	284.000	1227.000	869.000	1351.000	573.000	252.000	352.000	209.000
18	158.000	232.000	211.000	200.000	286.000	1247.000	884.000	1396.000	609.000	258.000	352.000	252.000
19	163.000	226.000	206.000	230.000	293.000	1261.000	892.000	1431.000	636.000	269.000	349.000	349.000
20	164.000	224.000	204.000	254.000	299.000	1271.000	899.000	1451.000	651.000	275.000	335.000	434.000
21	161.000	224.000	192.000	267.000	324.000	1276.000	899.000	1451.000	660.000	288.000	315.000	495.000
22	166.000	224.000	183.000	280.000	361.000	1276.000	896.000	1441.000	669.000	306.000	282.000	523.000
23	171.000	217.000	176.000	297.000	297.000	1261.000	884.000	1426.000	672.000	319.000	246.000	520.000
24	170.000	213.000	173.000	319.000	470.000	1242.000	865.000	1391.000	663.000	340.000	222.000	486.000
25	164.000	213.000	178.000	331.000	564.000	1213.000	854.000	1351.000	645.000	358.000	213.000	442.000
26	161.000	217.000	183.000	338.000	636.000	1184.000	843.000	1301.000	615.000	370.000	213.000	401.000
27	158.000	219.000	180.000	335.000	685.000	1160.000	836.000	1237.000	567.000	385.000	219.000	397.000
28	158.000	215.000	171.000	322.000	723.000	1133.000	843.000	1156.000	517.000	419.000	217.000	365.000
29	158.000	208.000	164.000	295.000		1101.000	847.000	1042.000	461.000	450.000	209.000	380.000
30	156.000	193.000	164.000	242.000		1078.000	858.000	915.000	411.000	461.000	206.000	399.000
31	154.000		175.000	197.000		1064.000		792.000		456.000	208.000	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE MISSOURI
MAJOR BASIN UPPER MISSISSIPPI RIVER
MINOR BASIN MISSISSIPPI-CAPE GIRARDEAU AREA
STATION LOCATION MISSISSIPPI RIVER AT
CAPE GIRARDEAU, MISSOURI 23

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	24	60*	11	15	2	4	6	3	6	9									
11	28	60*	12	6	3	3	6	8	12	20									
12	27	60*	1	12	2	7	9	0	9	9									
1	30	61*	2	14	1	1	2	0	0	0									
2	27	61*	3	10	2	1	3	0	0	0									
3	20	61*	4	13	30	0	30	76	0	76									
4	24	61*	5	5	19	0	19	34	0	34									
5	29	61*	6	8	8	2	10	5	3	8									
6	26	61*	7	14	8	1	9	0	0	0									
7	31	61*	8	28	10	1	11	37	0	37									
8	28	61*	9	15	5	4	9	20	8	28									
9	5	61	9	29	3	3	6	6	12	18									
9	11	61	10	27	-	-	-	8	0	8									
9	18	61	10	19	-	-	-	47	4	51									
9	24	61	10	5	-	-	-	28	8	36									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE MISSOURI
MAJOR BASIN UPPER MISSISSIPPI RIVER
MINOR BASIN MISSISSIPPI-CAPE GIRARDEAU AREA
STATION LOCATION MISSISSIPPI RIVER AT
CAPE GIRARDEAU, MISSOURI 23

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
			TOTAL	BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS														PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
MONTH	DAY	YEAR		COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE							
10	5	60	700			20		20	50	490	90	130	200										200						4---7
10	17	60	1900		20	240		130	240	1060	160	730	110	58	20	56	20	83	10	46	10	40	420	10					4-9-7
11	7	60	2800		50	70		20	50	2200	420	970	310	58	20	56	20	83	20	46	20	60	90						4-9-7
11	21	60	2500		20	150		110	70	1960	200	640	130	83	30	56	30	61	10	80	10	30	90	20	16				--9-7
12	5	60	3700		90	130		220	50	2950	270	770	180	80	30	56	20	82	20	61	10	20		10	8	1	1		4-937
2	6	61	26700		90	20		310	20	25980	270	4600	70	82	80	80	10	46	*	61	*	10	50	10	9	3			-19--
2	20	61	9400					220	110	8490	580	1990	160	82	30	80	10	86	10	92	10	40					2		3-963
3	6	61	3200					130		2370	740	250	340	86	20	71	10	80	10	82	10	50	20						-4963
3	20	61	400					70		160	220	110	40																-----
4	3	61	2200					70	20	1700	380	360	310																--9-3
4	17	61	600	20			50	110	20	220	160	200	220	82	50	26	10	86	10	70	*	40			4	2	1		--9--
5	1	61	800			50		70	20	560	160	1210	340	82	40	56	10	71	10	83	10	30							--9--
5	15	61	900			20		20		600	250	60	40	56	20	82	10	83	10	97	10	50							--9--
6	5	61	3700		100	620		290	20	2050	600	480	290	80	20	82	20	56	10	58	10	40			14				-8967
6	19	61	1800			130		150		930	580	230	290																--9-7
7	3	61	1400		20	230		150		660	350	410	370	58	10	71	10	80	10	26	10	50							4-9--
7	17	61	500			40		50		340	90	200	270	26	30	58	30	80	10	71	10	20							-----
8	7	61	300		20	20		90		110	50	200	110	58	30	47	30	56	10	26	00	30			2				-----
8	21	61	1200		60	250		100	20	520	290	190	100	56	70	47	10	92	10	58	*	10							---77
9	5	61	600			50		90		400	90	160	90	58	80	56	10	47	*	5	*	10							----7
9	18	61	1400			40		20		1020	290	80	100																4---7

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE MISSOURI

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN MISSISSIPPI-CAPE GIRARDEAU AREA

STATION LOCATION MISSISSIPPI RIVER AT CAPE GIRARDEAU, MISSOURI 23

DATE OF SAMPLE: BEGINNING MONTH	DAY	YEAR	END MONTH	DAY	GALLONS FILTERED	EXTRACTABLES: TOTAL	CHLORO-FORM	ALCOHOL	CHLOROFORM EXTRACTABLES: ETHER INSOLUBLES	WATER SOLUBLES	NEUTRALS: TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	4	60	10	17	3532	280	63	217	1	15	20	1	2	15	2	9	6	2	10
11	7	60	11	21	3870	281	56	225	1	11	21	2	2	15	2	8	4	1	10
12	6	60	12	19	3675	286	80	206	1	14	38	3	4	28	3	13	4	2	8
1	4	61	1	17	3930	318	105	213	1	12	56	8	8	39	1	22	4	2	8
2	6	61	2	20	3226	499	179	320	2	30	82	3	17	59	3	21	13	4	27
3	7	61	3	20	1530	464	117	347	1	29	41	2	3	32	4	16	8	3	19
4	4	61	4	17	1935	307	123	184	8	27	36	3	3	23	7	17	11	1	23
5	2	61	5	11	2400	338	113	225	1	26	38	4	4	28	2	19	9	2	20
6	7	61	6	19	3382	245	92	153	3	24	25	3	3	19	0	14	5	2	19
7	5	61	7	17	3675	204	96	108	6	25	23	2	2	17	2	13	12	1	16
8	7	61	8	21	3712	250	88	162	3	20	26	3	2	19	2	13	9	1	16
9	14	61	9	18	1013	379	107	272	4	30	32	5	3	24	0	14	11	1	15

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MISSOURI
MAJOR BASIN UPPER MISSISSIPPI RIVER
MINOR BASIN MISSISSIPPI-CAPE GIRARDEAU AREA
STATION LOCATION MISSISSIPPI RIVER AT
CAPE GIRARDEAU, MISSOURI 23

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	22.0	-	7.8	-	-	-	-	-	16	134	186	10	300	93	.2	317	-
10	10	60	19.5	-	7.9	-	-	-	-	-	16	136	126	15	380	81	.1	316	-
10	17	60	19.5	-	7.7	-	-	-	-	-	17	160	186	15	180	98	.0	353	-
10	24	60	16.0	-	7.9	-	-	-	-	-	19	110	184	10	140	104	.1	383	-
10	31	60	17.0	-	7.8	-	-	-	-	-	20	160	200	20	140	95	.2	319	-
11	7	60	11.0	-	7.9	-	-	-	-	-	16	144	176	30	380	83	.0	287	-
11	14	60	10.0	-	7.7	-	-	-	-	-	15	150	216	20	220	95	.0	264	-
11	21	60	11.0	-	7.7	-	-	-	-	-	17	118	180	10	220	125	.0	357	-
11	28	60	12.0	-	7.7	-	-	-	-	-	19	160	208	20	140	95	.1	296	-
12	5	60	7.0	-	7.9	-	-	-	-	-	20	176	214	15	140	100	.0	310	-
12	12	60	5.5	-	7.8	-	-	-	-	-	20	172	208	15	340	90	.0	292	-
12	19	60	3.5	-	7.9	-	-	-	-	-	21	168	196	20	220	83	.0	266	-
12	27	60	3.0	-	7.9	-	-	-	-	-	24	176	198	15	140	90	.1	327	-
1	3	61	3.5	-	7.9	-	-	-	-	-	19	190	200	10	140	83	.1	308	-
1	9	61	3.0	-	7.9	-	-	-	-	-	25	186	236	5	140	90	.1	352	-
1	16	61	4.5	-	7.9	-	-	-	-	-	25	144	240	10	120	100	.1	353	-
1	23	61	2.5	-	7.9	-	-	-	-	-	25	180	214	10	140	95	.2	360	-
1	30	61	2.0	-	7.9	-	-	-	-	-	25	188	226	-	120	-	-	-	-
2	3	61	-	-	-	-	-	-	-	-	-	-	-	10	-	90	.1	352	-
2	6	61	2.0	-	7.9	-	-	-	-	-	21	190	240	15	80	85	.1	379	-
2	13	61	4.5	-	7.9	-	-	-	-	-	25	188	220	15	180	98	.1	414	-
2	20	61	6.0	-	7.7	-	-	-	-	-	29	162	188	10	220	108	.2	351	-
2	27	61	5.0	-	7.7	-	-	-	-	-	20	132	186	15	720	75	.3	290	-
3	6	61	6.0	-	7.7	-	-	-	-	-	17	112	162	-	1120	-	-	-	-
3	13	61	8.0	-	7.7	-	-	-	-	-	12	98	136	-	1260	-	-	-	-
3	20	61	11.0	-	7.7	-	-	-	-	-	12	96	140	15	1260	45	.1	226	-
3	27	61	8.0	-	7.7	-	-	-	-	-	12	80	158	-	640	-	-	-	-
4	3	61	9.0	-	7.7	-	-	-	-	-	12	118	150	20	1000	60	.2	207	-
4	10	61	9.0	-	7.7	-	-	-	-	-	10	110	142	15	500	50	.0	205	-
4	17	61	10.0	-	7.7	-	-	-	-	-	11	118	138	15	460	65	.1	201	-
4	24	61	14.0	-	7.7	-	-	-	-	-	11	110	174	15	340	75	.1	203	-
5	1	61	15.5	-	7.7	-	-	-	-	-	10	112	160	15	720	50	.0	205	-
5	8	61	16.0	-	7.7	-	-	-	-	-	9	110	140	10	420	50	.1	205	-
5	15	61	18.0	-	7.7	-	-	-	-	-	6	88	114	15	720	30	.1	141	-
5	22	61	19.0	-	7.7	-	-	-	-	-	8	100	132	-	420	-	-	-	-
5	29	61	19.5	-	7.7	-	-	-	-	-	15	132	174	10	300	71	.0	256	-
6	5	61	22.5	-	7.7	-	-	-	-	-	12	124	164	10	420	47	.0	261	-
6	12	61	25.0	-	7.7	-	-	-	-	-	14	112	182	10	420	74	.0	302	-
6	19	61	24.0	-	7.8	-	-	-	-	-	14	132	180	10	760	75	.1	292	-
6	26	61	24.0	-	7.7	-	-	-	-	-	16	126	184	-	680	-	-	-	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MISSOURI

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN MISSISSIPPI-CAPE GIRARDEAU AREA

STATION LOCATION MISSISSIPPI RIVER AT

CAPE GIRARDEAU, MISSOURI 23

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	3	61	26.0	-	7.7	-	-	-	-	-	18	138	178	-	460	-	-	-	-
7	10	61	26.0	-	7.8	-	-	-	-	-	23	116	200	10	760	93	.0	304	-
7	17	61	27.0	-	7.7	-	-	-	-	-	16	140	196	-	580	83	.0	285	-
7	24	61	27.0	-	7.7	-	-	-	-	-	15	124	178	-	500	-	-	-	-
7	31	61	28.0	-	7.7	-	-	-	-	-	13	102	132	-	960	-	-	-	-
8	7	61	28.0	-	7.7	-	-	-	-	-	17	94	174	10	420	80	.0	281	-
8	14	61	26.5	-	7.7	-	-	-	-	-	14	124	154	15	540	55	.1	288	-
8	21	61	26.5	-	7.7	-	-	-	-	-	18	134	198	25	340	92	.2	354	-
8	28	61	26.0	-	7.7	-	-	-	-	-	20	140	220	10	180	120	.1	364	-
9	5	61	26.0	-	7.7	-	-	-	-	-	21	152	190	-	380	-	-	-	-
9	11	61	27.0	-	7.7	-	-	-	-	-	17	132	176	10	680	85	.0	277	-
9	15	61	-	-	7.6	-	-	-	-	-	-	-	-	16	-	102	-	322	-
9	18	61	24.0	-	7.7	-	-	-	-	-	11	110	136	-	1120	-	-	-	-
9	25	61	22.0	-	7.7	-	-	-	-	-	9	106	130	15	580	60	-	-	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Thebes, Illinois
Operated by U.S. Geological Survey

STATE	Missouri
MAJOR BASIN	Upper Mississippi River
MINOR BASIN	Mississippi-Cape Girardeau Area
STATION LOCATION	Mississippi River at Cape Girardeau, Missouri

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	129.000	84.800	87.600	68.600	50.800	166.000	383.000	298.000	263.000	115.000	202.000	84.800
2	127.000	88.000	82.700	70.300	50.500	163.000	375.000	276.000	250.000	126.000	181.000	86.400
3	117.000	95.200	81.900	70.900	50.700	149.000	357.000	263.000	235.000	146.000	167.000	87.100
4	114.000	112.000	80.900	70.900	49.900	136.000	346.000	259.000	226.000	173.000	171.000	83.700
5	110.000	143.000	80.800	69.900	50.600	126.000	334.000	265.000	214.000	170.000	168.000	89.600
6	106.000	158.000	83.100	68.100	50.900	148.000	325.000	303.000	203.000	149.000	177.000	105.000
7	104.000	146.000	82.700	66.000	51.900	174.000	323.000	370.000	189.000	133.000	187.000	114.000
8	100.000	133.000	81.400	64.600	52.700	198.000	322.000	461.000	188.000	124.000	180.000	116.000
9	95.000	126.000	79.500	65.500	53.300	232.000	333.000	560.000	189.000	122.000	161.000	130.000
10	88.100	123.000	85.200	65.400	54.300	284.000	343.000	638.000	189.000	133.000	151.000	134.000
11	85.600	127.000	97.900	64.400	55.400	329.000	342.000	690.000	186.000	149.000	152.000	129.000
12	80.200	128.000	102.000	63.300	57.000	336.000	363.000	726.000	189.000	143.000	188.000	121.000
13	78.600	123.000	93.700	62.500	58.800	335.000	396.000	735.000	199.000	126.000	206.000	110.000
14	78.600	115.000	88.400	61.700	61.300	319.000	400.000	705.000	193.000	117.000	192.000	109.000
15	80.700	113.000	89.000	61.700	63.100	315.000	375.000	647.000	187.000	110.000	174.000	150.000
16	83.700	110.000	89.100	61.800	66.100	332.000	352.000	585.000	181.000	104.000	157.000	321.000
17	86.400	108.000	86.100	62.700	73.400	359.000	342.000	527.000	177.000	98.600	143.000	429.000
18	92.200	111.000	80.100	64.000	84.700	372.000	319.000	478.000	185.000	101.000	130.000	465.000
19	98.300	112.000	77.000	64.100	100.000	354.000	289.000	458.000	211.000	98.500	116.000	485.000
20	96.700	115.000	75.900	64.100	105.000	341.000	267.000	433.000	223.000	99.700	106.000	478.000
21	91.200	117.000	74.000	66.500	101.000	336.000	253.000	411.000	210.000	120.000	97.500	423.000
22	87.600	118.000	73.300	67.300	108.000	325.000	241.000	386.000	192.000	143.000	93.200	359.000
23	83.600	114.000	70.500	64.400	133.000	318.000	229.000	368.000	176.000	139.000	91.000	309.000
24	80.100	112.000	69.600	62.300	152.000	317.000	229.000	339.000	158.000	148.000	87.000	277.000
25	77.400	105.000	70.200	61.000	155.000	316.000	260.000	314.000	144.000	196.000	83.600	267.000
26	75.000	100.000	71.800	60.100	154.000	311.000	294.000	297.000	134.000	244.000	84.000	310.000
27	76.300	97.000	75.500	58.400	152.000	301.000	323.000	290.000	126.000	241.000	86.700	356.000
28	80.400	93.000	78.400	57.700	156.000	285.000	347.000	298.000	122.000	234.000	90.100	376.000
29	81.900	92.200	73.800	56.000		277.000	341.000	308.000	119.000	244.000	95.800	343.000
30	81.700	92.200	70.000	54.000		298.000	318.000	297.000	115.000	240.000	93.900	288.000
31	82.100		68.500	53.000		355.000		279.000		220.000	88.100	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE ILLINOIS
MAJOR BASIN UPPER MISSISSIPPI RIVER
MINOR BASIN MISSISSIPPI RIVER-ST. LOUIS AREA
STATION LOCATION MISSISSIPPI RIVER AT
EAST ST. LOUIS, ILLINOIS 24

DATE SAMPLE TAKEN			DATE OF DETERMINATION		RADIOACTIVITY IN WATER						RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
					ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	MO.	DAY	$\mu\mu c/g$	$\mu\mu c/g$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$
10	10	60*	11	8	1	3	4	0	0	0							
10	17	60	11	21	-	-	-	0	0	0							
11	7	60*	11	23	0	3	3	0	0	0							
11	28	60*	12	7	-	-	-	0	0	0							
12	12	60*	12	28	0	2	2	0	0	0							
12	19	60	1	18	-	-	-	0	0	0							
1	9	61	2	1	0	4	4	0	0	0							
1	30	61*	2	7	-	-	-	0	0	0							
2	13	61*	2	23	0	2	2	0	0	0							
2	27	61*	3	8	-	-	-	8	3	11							
3	13	61	4	4	28	0	28	153	4	157							
3	27	61*	4	10	-	-	-	21	7	28							
4	10	61*	4	28	8	2	10	9	4	13							
4	24	61*	5	3	-	-	-	2	2	4							
5	8	61*	5	23	8	0	8	11	0	11							
5	22	61*	6	23	-	-	-	0	0	0							
6	12	61*	6	29	0	0	0	0	2	2							
6	26	61*	7	14	-	-	-	10	0	10							
7	10	61	8	7	3	0	3	6	0	6							
7	17	61	9	27	0	1	1	7	12	19							
8	12	61	9	15	1	1	2	0	7	7							
8	28	61	9	25	1	3	4	0	8	8							
9	11	61	10	5	-	-	-	63	38	101							
9	18	61	10	16	-	-	-	55	8	63							
9	25	61	10	5	-	-	-	16	5	21							

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WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE ILLINOIS

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN MISSISSIPPI RIVER-ST. LOUIS AREA

STATION LOCATION MISSISSIPPI RIVER AT EAST ST. LOUIS, ILLINOIS

24

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS														PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE							
10	3	60	1700			110		70	180	1200	160	880	20	82	30	56	30	26	20	57	10	10	130	30	5	4	1		4-9-7
10	17	60	3200	70		270		110	130	1870	710	680	130	82	30	56	20	58	20	26	20	20	40	10	4	2			4-977
12	5	60	7300	70	90	350		550	20	6100	130	3590	70	82	60	80	30	56	10	59	*	*	20	20	23	3	1		--9-7
12	19	60	19300	20	90	230		250		18570	110	7370	110	82	50	80	30	83	*	56	*	10	50		19	2		1	--937
1	3	61	23000		90	70		160	50	22320	270	9230	160	80	50	82	50							10	11				3-9--
1	16	61	27200		20	50		270	20	26810	70	6590	50	82	60	80	40						50	20	9	1			--9--
2	6	61	28000	20	130	70		380	50	27030	310	4090	90	82	80	80	10	9	*	26	*	*	50	30	3	2			319--
2	20	61	27200			200		270	70	26160	540	3820	250	82	90	83	*	36	*	56	*	10		50	16		2		3-93-
3	6	61	15800		20	130		420	50	14500	670	3310	290	82	30	56	10	83	10	80	10	40	20				2		41963
3	20	61	4200			70		270		3340	490	690	510	82	60	26	10	86	10	56	*	30							--963
4	3	61	7800					250	20	7040	470	2570	340	82	70	26	10	56	10	70	*	10	20						349-7
4	17	61	8200			150		410		6770	890	1510	210	82	50	56	10	26	10	58	10	20	20		8	2	2		34937
5	1	61	6900		40	100	20	230		5490	970	2190	310	82	90	9	10	26	*	58	*	10			159	7			3-973
5	15	61	5400			200		130	50	4490	490	3240	340	56	40	82	20	83	10	80	10	20			27	1			3-9--
6	5	61	9500	20	290	1990		270	40	5360	1510	1620	290	82	30	80	20	56	10	58	10	30		10	520	6	1		74913
6	19	61	2400			270		230		1010	910	210	190																7-96-
7	17	61	2200		20	210		210		1470	290	990	150	26	20	58	10	84	10	82	10	40			13	16			74937
8	7	61	1700			170		60		1300	120	310	60	58	80	56	10	26	*						3			1	4-9-7
8	21	61	1500			80		190	40	1060	100	460	20	58	80	20	10	56	10	18	*	*		20	158	14			4---3
9	11	61	600			40		100		350	100	80	20	18	40	58	30	56	10	54	*	10							----7
9	18	61	800			110		20		560	90	1160	270										50						----7

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE ILLINOIS

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN MISSISSIPPI RIVER-ST. LOUIS AREA

STATION LOCATION MISSISSIPPI RIVER AT EAST ST. LOUIS, ILLINOIS 24

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	3	60	10	14	4380	191	48	143	0	10	19	3	2	13	1	8	3	1	7
12	5	60	12	14	3330	273	67	206	2	15	28	2	3	22	1	9	4	2	7
1	10	61	1	22	4287	222	40	182	1	7	18	3	3	11	1	4	1	1	8
2	14	61	2	28	5791	220	67	153	1	12	33	3	4	24	2	9	4	1	7
4	3	61	4	13	3897	237	78	159	2	22	20	1	2	16	1	8	9	2	15
5	1	61	5	12	3053	286	118	168	5	30	32	3	2	25	2	13	14	1	23
6	5	61	6	16	4060	234	55	179	1	11	22	3	2	17	0	8	4	2	7
7	10	61	7	20	3711	188	51	137	3	13	16	2	2	11	1	6	5	1	7
8	12	61	8	22	2997	242	88	154	2	20	25	2	2	20	1	9	9	2	21

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE ILLINOIS
MAJOR BASIN UPPER MISSISSIPPI RIVER
MINOR BASIN MISSISSIPPI RIVER-ST. LOUIS AREA
STATION LOCATION MISSISSIPPI RIVER AT
EAST ST. LOUIS, ILLINOIS 24

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	24.5	5.6	7.6	2.0	-	-	-	.2	13	164	192	25	100	70	-	290	16000
10	6	60	22.0	5.9	7.8	2.2	-	-	-	.2	12	148	164	11	100	57	-	274	-
10	10	60	20.8	6.5	7.8	3.6	-	-	-	.2	13	148	172	30	100	52	-	282	51000
10	17	60	20.1	7.5	7.8	2.2	-	-	-	.2	13	154	180	28	90	63	-	247	15000
10	24	60	16.5	8.3	7.8	1.9	-	-	-	.2	13	156	192	25	70	77	-	280	11000
10	31	60	14.9	8.9	8.0	2.0	-	-	-	.2	13	160	184	27	70	45	-	270	14000
11	7	60	12.0	10.0	7.9	2.3	-	-	-	.3	14	160	192	27	70	65	-	272	2700
11	14	60	8.1	11.0	7.8	4.3	-	-	-	.4	12	152	172	27	90	56	-	258	2400
11	21	60	7.7	11.6	7.7	4.4	-	-	-	.4	14	158	188	32	70	65	-	258	1200
11	28	60	11.1	10.7	8.0	4.6	-	-	-	.3	13	166	196	30	60	50	-	248	10000
12	5	60	6.5	11.9	8.0	5.0	-	-	-	.4	14	168	196	31	50	50	-	250	8000
12	12	60	5.0	12.7	7.8	4.2	-	-	-	.3	13	158	192	27	60	50	-	275	1700
12	19	60	2.5	13.3	8.1	4.6	-	-	-	.4	14	170	198	31	60	59	-	290	5500
1	3	61	1.0	14.1	8.2	4.2	-	-	-	.5	15	176	208	31	40	68	-	298	-
1	9	61	2.0	13.6	8.2	4.8	-	-	-	.5	16	156	220	30	40	69	-	300	2300
1	16	61	2.0	13.4	8.3	5.0	-	-	-	.6	15	176	208	28	35	53	-	222	10000
1	23	61	1.7	14.0	8.2	6.0	-	-	-	.6	15	182	214	32	40	55	-	311	5500
1	30	61	.6	14.5	8.2	5.2	-	5.3	10.0	.5	13	190	222	33	50	50	-	311	4500
2	6	61	.5	14.5	7.8	6.8	-	-	-	.7	16	190	212	27	50	55	-	308	4300
2	13	61	1.1	14.0	7.8	5.3	-	-	-	.7	19	188	218	27	35	66	-	318	2300
2	20	61	2.2	13.8	7.8	7.0	-	-	-	.9	19	168	202	29	50	51	-	310	6000
2	27	61	3.3	12.2	8.0	7.7	-	-	-	1.0	17	148	168	29	450	50	-	295	9000
3	6	61	6.6	11.1	7.7	6.0	-	-	-	.9	18	136	174	30	300	45	-	230	5100
3	13	61	6.5	10.5	7.7	9.2	-	-	-	.9	11	116	140	30	1100	38	-	219	30000
3	20	61	6.1	10.2	7.8	6.8	-	-	-	.8	12	120	166	26	800	53	-	273	6300
3	27	61	8.9	10.4	8.0	6.0	-	-	-	.6	14	146	202	27	300	70	-	281	7800
4	3	61	8.3	9.5	7.8	6.1	-	-	-	.6	11	148	190	27	400	60	.3	268	4600
4	10	61	7.8	9.6	7.6	6.3	-	-	-	.6	10	120	148	31	450	41	.3	240	2200
4	17	61	7.8	9.8	7.8	4.0	-	-	-	.3	11	138	172	30	200	55	.2	240	60000
4	24	61	12.8	9.2	8.2	4.1	-	-	-	.2	14	162	208	20	150	62	.4	260	8000
5	1	61	13.9	6.8	7.9	3.7	-	-	-	.1	15	160	202	23	250	65	.3	264	5600
5	8	61	15.0	7.1	7.8	4.5	-	-	-	.2	11	130	176	26	750	51	.2	255	12000
5	15	61	18.3	6.2	7.8	3.1	-	-	-	.1	10	128	164	30	400	50	.1	248	*1000
5	22	61	18.3	5.0	7.8	3.0	-	-	-	.1	12	154	200	27	180	59	-	284	2200
6	5	61	21.7	4.8	7.8	2.5	-	-	-	.1	10	128	164	27	100	57	.1	226	700
6	12	61	25.6	4.6	7.7	2.4	-	-	-	.1	11	138	184	24	100	63	.1	215	6300
6	19	61	23.9	4.8	7.6	2.3	-	-	-	.1	14	136	176	22	200	62	.2	276	4900
6	26	61	23.9	5.5	7.7	3.1	-	-	-	.1	15	144	190	20	200	66	.3	300	7200

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE ILLINOIS

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN MISSISSIPPI RIVER-ST. LOUIS AREA

STATION LOCATION MISSISSIPPI RIVER AT

EAST ST. LOUIS, ILLINOIS 24

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	10	61	25.6	5.1	7.7	3.4	-	-	-	.1	15	130	176	20	1000	57	.2	268	8300
7	17	61	26.7	4.8	7.8	2.6	-	-	-	.1	14	144	192	20	125	68	.3	264	3300
7	24	61	26.7	5.0	7.6	2.8	-	-	-	.1	16	116	162	33	315	48	.2	224	2700
7	31	61	28.3	4.8	7.5	2.6	-	-	-	.1	13	110	152	30	250	50	.2	222	2000
8	7	61	29.4	4.0	7.6	3.0	-	-	-	.1	14	122	166	30	150	40	.2	200	4300
8	14	61	27.2	3.5	7.5	2.9	-	-	-	.1	11	102	128	21	450	32	.3	198	1400
8	21	61	27.2	5.5	7.8	4.2	-	-	-	.1	15	138	176	21	125	57	-	199	3800
8	28	61	26.1	6.8	7.9	2.9	-	-	-	.1	15	144	184	22	100	56	.1	210	4100
9	11	61	27.2	5.5	7.8	2.9	-	-	-	.1	16	124	164	21	800	46	.3	188	5800
9	18	61	22.2	3.5	7.5	2.1	-	-	-	.1	10	88	108	25	900	26	.3	180	13000
9	25	61	22.7	4.7	7.6	2.3	-	-	-	.1	15	116	156	21	300	60	.3	200	9100

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Alton, Illinois
Operated by U.S. Geological Survey

STATE Illinois

MAJOR BASIN Upper Mississippi River

MINOR BASIN Mississippi River-St. Louis Area

STATION LOCATION Mississippi River at East St. Louis, Illinois

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	54.700	50.000	49.100	40.900	34.600	89.000	188.000	161.000	119.000	75.600	62.700	31.300
2	58.700	64.300	47.600	37.800	34.400	82.300	189.000	159.000	115.000	97.100	91.500	28.200
3	57.800	69.800	48.300	37.200	31.200	79.500	196.000	156.000	108.000	95.300	82.100	32.400
4	57.500	78.100	49.300	38.000	31.600	69.900	199.000	150.000	100.000	73.700	90.700	56.300
5	56.300	72.800	45.100	38.700	32.500	74.500	207.000	149.000	91.200	63.300	96.200	64.600
6	56.200	67.500	49.300	38.500	33.700	89.900	219.000	148.000	79.800	59.600	95.100	44.600
7	53.300	64.400	47.200	38.900	33.500	114.000	233.000	179.000	78.200	55.100	76.800	29.100
8	45.900	66.400	54.900	38.400	33.300	139.000	241.000	207.000	77.200	47.500	78.400	30.900
9	47.600	75.100	58.900	38.200	32.800	160.000	245.000	225.000	90.500	41.500	77.200	38.400
10	40.100	74.900	58.400	35.500	32.600	172.000	239.000	228.000	90.900	43.500	91.100	37.500
11	36.700	71.900	53.200	35.800	31.800	176.000	231.000	226.000	98.300	40.100	142.000	30.300
12	41.200	62.400	49.200	35.600	32.600	170.000	216.000	203.000	103.000	40.200	121.000	39.500
13	39.900	63.600	48.500	35.700	30.000	157.000	190.000	162.000	83.100	36.200	104.000	67.000
14	43.800	59.700	45.300	35.900	29.000	165.000	147.000	151.000	70.700	35.200	86.100	175.000
15	42.300	52.500	36.400	35.200	26.800	177.000	121.000	126.000	77.000	36.900	73.300	213.000
16	51.500	63.800	31.100	35.500	34.700	181.000	121.000	113.000	73.200	36.200	55.500	204.000
17	51.900	59.400	33.300	36.500	48.900	177.000	102.000	135.000	75.300	36.000	47.600	215.000
18	50.700	60.200	34.900	37.700	51.600	163.000	100.000	153.000	80.800	31.100	45.000	230.000
19	42.000	64.000	36.000	37.700	50.200	158.000	108.000	146.000	78.100	46.700	44.100	204.000
20	41.200	66.400	37.700	35.600	45.400	151.000	110.000	139.000	67.600	72.200	44.300	107.000
21	37.900	61.100	37.100	34.200	77.500	147.000	108.000	130.000	72.700	45.700	41.200	84.700
22	34.100	59.800	33.900	33.500	73.400	144.000	112.000	130.000	64.200	69.800	35.500	74.100
23	34.700	55.300	32.500	32.400	74.900	149.000	132.000	127.000	59.700	110.000	33.000	75.200
24	30.800	52.300	34.000	32.500	78.000	152.000	150.000	120.000	52.900	126.000	33.600	119.000
25	33.800	51.000	39.100	33.600	88.600	150.000	166.000	122.000	48.000	115.000	35.200	165.000
26	38.400	48.800	46.700	34.200	92.900	147.000	179.000	118.000	48.200	86.600	28.700	177.000
27	36.700	51.700	44.400	31.800	106.000	145.000	181.000	118.000	45.900	73.400	35.400	152.000
28	36.300	53.800	44.300	32.300	106.000	154.000	173.000	118.000	47.900	79.200	32.100	119.000
29	35.200	49.600	45.700	34.800		166.000	163.000	118.000	49.200	87.400	29.800	90.800
30	42.000	44.400	44.300	34.100		184.000	163.000	119.000	53.900	86.100	29.300	89.100
31	43.800		41.300	34.400		190.000		121.000		79.600	32.700	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE IOWA

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN MISSISSIPPI-DES MOINES-SKUNK RIVERS

STATION LOCATION MISSISSIPPI RIVER AT

BURLINGTON, IOWA 25

DATE SAMPLE TAKEN MO.	DAY	YEAR	DATE OF DETERMINATION MONTH	DAY	RADIOACTIVITY IN WATER ALPHA SUSPENDED μμc/l	ALPHA DISSOLVED μμc/l	ALPHA TOTAL μμc/l	BETA SUSPENDED μμc/l	BETA DISSOLVED μμc/l	BETA TOTAL μμc/l		RADIOACTIVITY IN PLANKTON (dry) DATE OF DETERMINATION MO.	DAY	GROSS ACTIVITY ALPHA μμc/g	GROSS ACTIVITY BETA μμc/g		RADIOACTIVITY IN WATER GROSS ACTIVITY SUSPENDED μμc/l	DISSOLVED μμc/l	TOTAL μμc/l
10	17	60*	11	23	0	2	2	0	0	0									
11	7	60	12	19	1	1	2	0	2	2									
12	12	60*	1	17	0	2	2	0	0	0									
1	23	61*	2	24	1	1	2	0	0	0									
2	27	61*	3	10	1	0	1	1	0	1									
3	20	61*	4	28	5	1	6	0	6	6									
4	24	61*	5	15	1	0	1	0	0	0									
5	22	61*	6	23	1	2	3	0	0	0									
6	26	61*	7	14	1	1	2	0	0	0									
7	10	61	8	30	1	0	1	3	11	14									
8	21	61*	9	22	2	1	3	10	8	18									
9	5	61	10	4	0	0	0	3	9	12									
9	11	61	10	3	-	-	-	4	0	4									
9	18	61	10	23	-	-	-	10	13	23									
9	25	61	10	5	-	-	-	8	9	17									

PHS-2845-5
REV. 4-61

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE IOWA

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN MISSISSIPPI-DES MOINES SKUNK RIVERS

STATION LOCATION MISSISSIPPI RIVER AT BURLINGTON, IOWA 25

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
			TOTAL	BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR		COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	3	60	1500			240		90		1110	90	330	70	26	30	58	20	56	20	82	10	20	90		1				-49-7
10	17	60	6900	240	20	470		290	130	4420	1340	1780	110	56	20	82	20	58	20	26	10	30	180	40	6	1		1	74937
11	7	60	3500		70	180		40	20	2970	250	2030	380	56	40	83	20	58	10	61	10	20	50		34				4-9-7
11	21	60	3200	20	20	110		130	20	2290	620	1100	550	56	20	80	20	83	20	82	20	30		20	24	2		1	74967
12	5	60	6400		20	70		70		4600	1650	1700	260	80	40	82	30	56	10	61	10	20	20	20	18	1			--943
1	3	61	6900		20	90		140	90	6410	110	2410	50	80	60	82	40							10	11	1			--9--
1	16	61	10600	20	50	70		270	40	10120	70	920	50	82	80	80	10	61	*	26	*	*		30	35	2			-19--
2	20	61	54600	20	20	90		250	70	53750	450	3750	110	82	90								50	40	17		2		-19--
3	6	61	27900		50			430	70	26160	1160	1770	470	92	30	56	10	58	10	82	10	40					3		3497-
3	20	61	14500			20		310	20	12590	1580	1040	4910	82	90	70	*	9	*					10			3		-196-
4	17	61	126300			230		440	100	124410	1120	3520	500	82	90	58	*	56	*	62	*	10		30	32				31967
5	1	61	10800		20	70		310	160	8580	1630	5670	690	56	50	82	20	58	20	45	10	20	50		12	3	2		3-967
5	22	61	11700	20	220	1450	70	270	70	8470	1180	540	470	82	60	56	20	47	*	58	*	10		10					38927
6	5	61	11000	80	310	2010		330	40	7220	1010	3130	410	80	40	82	30	56	20	58	*	10			286	6			48927
6	19	61	1400			160		70	110	1090		2390	380	80	40	83	30	56	20	58	10	10			6	2			--9--
7	10	61	2500	50		360		580	110	1270	90	1610	70	83	20	58	20	80	20	56	10	30			20	3	1		419--
7	17	61	3500			560		120		2420	350	1100	100	58	40	83	20	56	10	26	10	20			51	1			--977
8	7	61	4500		20	850		170		3170	330	910	270	58	60	56	30	83	*	92	*	*				6	3		48977
8	21	61	4000	40		350		310		2940	310	1490	120	58	60	56	30	89	*	83	*	10			5	13			48937
9	5	61	1700	20	20	450		130	50	920	160	800	200	56	60	58	40	26	*			*			91	30			-- 7
9	18	61	1600			220		200		1070	130	1740	420	56	60	83	20	58	10	21	10	10			4	2			--9-7

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE IOWA

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN MISSISSIPPI-DES MOINES-SKUNK RIVERS

STATION LOCATION MISSISSIPPI RIVER AT

BURLINGTON, IOWA 25

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	2	60	10	10	5000	200	31	169	1	8	10	1	1	7	1	4	2	1	5
11	1	60	11	10	5000	151	37	114	1	9	14	1	1	11	1	4	2	1	6
12	5	60	12	14	5000	144	25	119	1	6	10	0	1	8	1	3	1	1	3
1	1	61	1	9	5000	212	30	182	1	7	11	1	1	8	1	3	2	1	5
2	6	61	2	14	5000	175	44	131	2	10	13	1	1	11	0	5	3	1	10
3	6	61	3	15	5000	236	69	167	1	14	23	1	1	18	3	9	5	1	16
4	3	61	4	11	5000	205	76	129	2	20	20	2	1	17	0	8	7	2	17
5	1	61	5	11	4700	181	86	95	2	26	24	2	2	20	0	10	7	2	15
6	5	61	6	12	5010	172	44	128	0	11	15	2	1	9	2	6	3	1	8
7	5	61	7	13	5020	174	47	127	2	13	12	3	1	8	0	6	5	1	8
8	7	61	8	13	5100	148	42	106	1	9	12	2	1	9	0	5	3	1	11
9	4	61	9	10	5000	158	54	104	2	12	14	2	1	10	1	7	5	1	13

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Keokuk, Iowa
Operated by U.S. Geological Survey

STATE: Iowa

MAJOR BASIN: Upper Mississippi River

MINOR BASIN: Mississippi-Des Moines-Skunk Rivers

STATION LOCATION: Mississippi River at Burlington, Iowa

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	44.300	49.400	40.000	30.000	26.800	67.000	153.000	108.000	92.500	37.900	40.700	21.100
2	43.300	61.900	40.800	29.700	26.900	57.700	164.000	101.000	87.700	43.700	46.900	19.500
3	44.900	62.600	37.800	29.200	26.900	57.100	181.000	99.900	82.100	47.700	59.300	27.000
4	44.700	60.700	34.000	29.300	26.300	60.200	200.000	91.500	73.600	40.800	59.700	46.600
5	43.800	55.100	34.000	27.500	25.700	60.900	208.000	84.000	66.100	39.100	56.700	32.600
6	43.000	55.400	37.500	27.900	25.200	81.700	202.000	82.500	63.200	34.200	42.700	20.000
7	41.200	58.300	40.700	25.800	23.900	105.000	189.000	74.800	56.700	31.200	47.000	16.200
8	35.600	61.600	49.500	24.800	24.300	122.000	174.000	71.000	57.500	30.200	46.400	18.000
9	32.300	66.800	46.200	25.000	24.200	124.000	164.000	70.400	59.600	29.900	45.500	18.800
10	32.200	62.800	39.700	25.000	25.700	123.000	142.000	68.100	72.900	29.100	44.000	19.500
11	31.000	60.200	40.900	25.100	23.700	106.000	127.000	67.000	65.600	27.200	42.300	22.000
12	31.000	57.800	37.900	25.200	23.200	101.000	110.000	64.900	53.600	24.200	44.700	27.000
13	30.900	44.600	30.000	26.200	24.600	106.000	91.500	59.700	48.000	22.100	43.500	52.800
14	34.400	44.100	26.000	27.000	27.000	107.000	84.500	58.700	46.800	21.000	34.900	123.000
15	39.400	47.300	24.700	27.500	24.200	100.000	80.300	58.100	54.200	19.800	32.900	130.000
16	40.200	47.300	25.300	29.000	26.000	97.100	71.500	62.500	50.100	19.200	29.900	124.000
17	36.100	47.100	24.000	28.900	25.900	105.000	83.500	68.100	49.000	19.600	27.400	91.300
18	34.100	54.600	26.500	30.000	26.200	96.700	83.500	70.800	47.200	20.700	25.700	64.400
19	33.100	50.400	31.600	28.900	26.700	81.200	81.000	73.800	46.100	34.000	23.700	55.000
20	31.000	49.900	32.300	26.900	30.100	80.200	79.200	73.700	44.400	26.300	22.700	49.000
21	27.800	48.500	29.400	27.200	41.200	76.300	82.800	78.000	43.200	34.400	20.500	43.800
22	24.500	46.000	31.100	26.700	50.500	83.500	81.000	76.600	40.900	41.800	20.600	46.300
23	21.500	46.700	32.200	27.800	55.000	89.200	78.700	75.400	35.500	40.800	22.500	46.500
24	26.400	41.700	32.900	26.800	59.600	92.400	85.500	77.500	30.300	37.800	22.000	58.100
25	26.500	42.200	32.800	26.800	69.600	93.700	93.100	81.600	30.500	34.800	21.300	55.600
26	30.000	41.200	32.500	24.700	79.200	98.000	104.000	88.300	30.800	37.300	20.400	56.000
27	31.500	40.600	34.000	22.800	75.400	104.000	108.000	88.200	30.400	38.800	19.600	48.500
28	32.800	40.800	33.900	21.900	69.700	122.000	108.000	92.300	30.400	37.600	20.500	43.200
29	32.500	39.200	32.500	21.800		130.000	108.000	96.900	31.500	44.200	22.000	35.300
30	28.800	38.800	31.500	22.300		140.000	109.000	92.900	34.000	46.100	22.300	34.100
31	37.500		30.400	24.200		148.000		92.700		45.700	23.300	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE IOWA

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN MISSISSIPPI-WAPSIPINICON & TRIB.

STATION LOCATION MISSISSIPPI RIVER AT DUBUQUE, IOWA

26

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	12	60*	11	23	0	2	2	0	3	3									
11	30	60*	12	20	1	1	2	0	14	14									
4	25	61*	5	8	2	0	2	0	0	0									
5	22	61*	6	23	0	0	0	0	0	0									
6	19	61*	7	21	0	0	0	0	0	0									
7	24	61	8	8	0	4	4	0	0	0									
8	30	61*	9	15	0	1	1	0	7	7									
9	5	61	9	29	-	-	-	7	1	8									
9	11	61	10	13	0	1	1	1	8	9									
9	26	61	10	9	-	-	-	3	20	23									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE IOWA

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN MISSISSIPPI-WAPSIPINICON & TRIB.

STATION LOCATION MISSISSIPPI RIVER AT

DUBUQUE, IOWA

26

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	4	60	1300			70		110	50	1060	50	130	20	56	50	58	30	61	10	82	10	10			7	1			4---7
11	2	60	7700		650	230		50	70	6030	670	3710	560	56	40	82	30	59	10	83	10	20	130						-2977
11	16	60	2600		110			20	90	2240	110	660	20	82	40	80	20	56	20	83	*	10	20		40	6			--9-7
11	23	60	3600			70			110	3350	90	1630	160	82	40	80	20	56	20	61	10	20		10	12	1			4-9-7
11	30	60	4800			70			110	4310	110	770	370	80	20	56	20	82	10	58	10	30	70	10	31	12			--9-7
4	3	61	1700			90		110	90	1010	420	690	200	56	30	82	20	58	10	80	10	40	20	10					--9-3
4	25	61	26700			210		290		24260	1900	1470	210	82	70	56	10	9	10	58	*	10			2		1		3-973
5	2	61	37100			540		410		33410	2730	3370	480	56	40	82	30	58	10	80	10	20			1	2			31977
5	9	61	40700	60		660		250		35980	3730	8490	520	82	70	56	10	97	10	58	*	10			138	14	2	5	3-967
6	12	61	3300	40	330	730		120		1970	100	440	270	80	40	56	20	58	20	81	10	10		20	80	31			-2927
7	24	61	1000			180		90		760	20	510	70	56	40	58	30	59	10	82	10	10			20	31		1	--9-7
8	7	61	1200	20		180		200		740	70	510	160	56	40	58	20	82	*	89	*	40			8	29	6	1	-19-7
8	23	61	1600		40	20		100		1280	100	100		56	70	58	20	80	10	83	*	*			41	6	2	1	--9-7
8	30	61	2000	20	150	190		270	20	1240	120	100	20	56	50	58	20	80	20	82	*	10			209	128		2	--9-7
9	5	61	1400	60	130	40		100		930	100	120	20	56	60	58	40	47	*	89	*	*			5	10	2		--9-7
9	26	61	1900	40	80	190		100		1390	100	520	80	56	70	58	20	83	10	26	*		150		83	13			--9-7

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE IOWA

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN MISSISSIPPI-WAPSIPINICON & TRIB.

STATION LOCATION MISSISSIPPI RIVER AT DUBUQUE, IOWA

26

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	5	60	10	13	2010	440	70	370	1	20	21	2	2	16	1	8	5	1	14
11	1	60	11	8	3405	186	41	145	2	9	13	2	1	9	1	6	2	1	8
12	7	60	12	13	4500	165	34	131	1	9	12	1	1	10	0	4	2	1	5
3	7	61	3	14	4440	264	75	189	2	19	22	1	1	17	3	8	5	2	17
4	3	61	4	13	4613	197	72	125	1	21	19	2	1	16	0	9	6	1	15
5	2	61	5	9	4267	153	42	111	1	10	14	2	1	11	0	5	3	1	8
6	4	61	6	14	4957	179	70	109	2	18	21	3	2	16	0	9	6	1	13
7	3	61	7	11	4215	166	66	100	3	17	18	3	1	14	0	9	7	1	11
8	9	61	8	20	7500	108	36	72	2	8	9	1	1	7	0	5	4	1	7
9	6	61	9	18	5722	130	31	99	1	8	10	1	1	7	1	4	3	1	4

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE IOWA
MAJOR BASIN UPPER MISSISSIPPI RIVER
MINOR BASIN MISSISSIPPI-WAPSIPINICON & TRIB.
STATION LOCATION MISSISSIPPI RIVER AT
DUBUQUE, IOWA 26

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	4	60	15.0	8.6	8.0	3.5	7	-	-	-	8	111	120	75	25	-	-	-	36
10	12	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2300
11	2	60	7.4	10.8	8.2	2.1	4	-	-	-	8	132	144	75	20	-	-	-	300
11	16	60	7.0	11.1	8.2	1.8	5	-	-	-	8	130	142	75	20	-	-	-	220
11	23	60	6.0	11.2	8.2	1.7	4	-	-	-	8	119	139	100	50	-	-	-	40
11	30	60	2.0	12.0	8.3	1.8	4	-	-	-	7	120	139	100	75	-	-	-	40
4	25	61	8.3	9.2	8.0	3.4	8	-	-	-	9	90	121	200	190	-	-	-	-
5	2	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	680
5	9	61	18.2	7.6	8.8	3.7	8	-	-	-	8	110	140	150	75	-	-	-	90
5	22	61	17.0	10.8	8.3	3.5	8	-	-	-	8	96	112	150	75	-	-	-	200
6	12	61	20.8	4.2	7.8	3.2	4	-	-	-	9	112	136	75	70	-	-	-	120
6	19	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
7	24	61	24.0	4.6	8.0	8.2	14	-	-	-	9	120	139	125	75	-	-	-	1000
8	7	61	26.7	5.1	7.8	1.8	8	-	-	-	10	122	144	100	100	-	-	-	-
8	21	61	25.6	5.2	8.0	2.2	8	-	-	-	9	126	146	75	100	-	-	-	-
8	30	61	26.0	4.9	8.1	1.8	6	-	-	-	8	119	147	75	100	-	-	-	3600
9	5	61	24.2	6.8	7.9	3.0	6	-	-	-	9	117	123	75	100	-	-	-	500
9	18	61	23.1	6.6	8.1	2.2	5	-	-	-	9	119	140	75	100	-	-	-	-
9	26	61	16.2	6.4	8.2	2.2	4	-	-	-	9	120	143	100	150	-	-	-	500

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at McGregor, Iowa
Operated by U.S. Geological Survey

STATE: Iowa

MAJOR BASIN: Upper Mississippi River

MINOR BASIN: Mississippi-Wapsipinicon & Trib.

STATION LOCATION: Mississippi River at Dubuque, Iowa

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	23.000	16.500	16.700	11.600	10.700	20.900	103.000	54.400	55.500	17.000	20.600	11.600
2	22.800	20.800	15.800	11.600	10.700	19.700	94.300	50.700	50.500	16.700	21.000	12.200
3	22.000	23.400	16.500	11.600	10.700	23.000	86.000	47.200	45.700	16.900	19.100	11.700
4	22.100	29.700	16.600	11.700	10.600	31.200	77.900	43.600	40.000	16.800	16.000	11.600
5	20.200	37.500	20.200	11.800	10.600	41.400	70.000	39.800	35.000	16.900	16.900	10.800
6	17.100	35.800	22.800	11.800	10.600	43.100	67.000	37.800	31.100	16.500	17.900	10.600
7	15.900	36.900	21.300	11.800	10.600	33.800	62.500	36.100	33.500	15.600	17.900	10.600
8	14.600	35.500	20.300	11.700	10.800	25.700	55.000	37.000	32.800	14.500	17.500	10.500
9	14.500	31.700	18.600	12.000	11.700	18.300	50.600	39.200	25.000	14.500	17.100	12.900
10	14.600	22.600	16.100	12.900	11.700	20.800	45.500	37.100	20.900	13.100	16.500	13.300
11	15.000	21.400	12.100	14.800	11.700	24.000	40.700	34.000	22.400	12.600	16.100	13.800
12	15.500	20.600	12.100	15.500	11.800	24.000	38.600	35.300	26.300	11.300	15.500	15.200
13	15.600	18.900	10.700	14.600	13.100	21.700	36.600	36.400	28.200	10.600	14.100	22.900
14	15.500	17.200	13.600	13.900	12.900	18.800	35.200	38.200	28.500	9.720	14.700	21.200
15	14.800	18.500	16.200	13.800	12.700	16.100	34.200	42.400	30.000	9.660	15.200	10.200
16	15.400	19.700	18.500	13.800	12.700	15.900	33.500	42.900	26.800	10.100	14.000	9.560
17	13.800	20.200	18.700	13.800	12.900	16.500	32.900	42.600	22.300	9.780	11.400	9.850
18	13.000	19.200	19.100	13.800	13.600	17.600	36.000	48.200	20.300	10.400	10.200	10.300
19	12.000	19.600	20.300	13.700	13.500	19.700	40.000	54.500	21.400	11.200	9.500	10.300
20	12.900	18.700	20.600	13.200	13.300	23.500	39.600	55.500	22.400	12.400	10.100	11.300
21	13.000	20.500	20.300	13.200	13.700	30.500	41.300	58.700	19.200	13.100	11.500	11.800
22	12.900	21.200	17.500	13.300	16.800	31.100	47.900	66.200	17.900	13.500	10.700	13.100
23	12.100	20.500	14.300	13.300	23.000	32.100	51.100	70.200	18.900	15.200	10.900	16.400
24	12.600	20.500	14.400	12.500	22.900	36.400	52.800	73.900	18.800	18.700	10.900	16.600
25	12.900	19.800	14.400	12.400	19.400	48.000	53.600	75.700	18.200	18.400	11.700	15.100
26	12.700	18.200	14.400	12.400	16.000	66.000	54.700	75.900	18.100	18.200	10.400	11.800
27	13.300	17.000	14.200	12.100	17.500	81.900	56.100	74.600	18.600	18.200	10.800	10.300
28	13.500	19.600	12.700	12.000	20.500	102.000	59.600	73.000	18.300	17.600	11.300	9.910
29	13.200	18.200	12.800	11.900		114.000	58.500	70.300	18.400	17.200	12.400	9.920
30	12.500	18.300	12.600	11.900		114.000	57.000	65.700	17.200	16.500	12.200	15.200
31	14.100		12.400	10.700		109.000		61.000		20.100	12.400	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE MINNESOTA

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN UPPER PORTION-UPPER MISSISSIPPI

STATION LOCATION MISSISSIPPI RIVER LOCK DAM #3 BELOW

ST. PAUL, MINNESOTA 27

DATE SAMPLE TAKEN MO.	DAY	YEAR	DATE OF DETERMINATION MONTH	DAY	RADIOACTIVITY IN WATER ALPHA SUSPENDED μμc/l	ALPHA DISSOLVED μμc/l	ALPHA TOTAL μμc/l	BETA SUSPENDED μμc/l	BETA DISSOLVED μμc/l	BETA TOTAL μμc/l	RADIOACTIVITY IN PLANKTON (dry) DATE OF DETERMINATION MO.	DAY	GROSS ACTIVITY ALPHA μμc/g	GROSS ACTIVITY BETA μμc/g	RADIOACTIVITY IN WATER GROSS ACTIVITY SUSPENDED μμc/l	DISSOLVED μμc/l	TOTAL μμc/l
10	25	60*	11	8	0	1	1	0	5	5							
11	29	60*	12	9	0	2	2	0	1	1							
12	20	60*	1	17	0	1	1	0	1	1							
1	31	61*	2	14	0	2	2	0	4	4							
2	28	61*	3	16	0	2	2	0	0	0							
3	28	61	4	7	0	1	1	0	0	0							
4	25	61*	5	12	0	2	2	0	1	1							
5	31	61*	6	13	1	2	3	0	0	0							
6	27	61*	7	17	1	2	3	0	0	0							
8	1	61*	8	23	0	1	1	0	8	8							
8	29	61*	9	25	1	4	5	0	0	0							
9	5	61	9	29	-	-	-	3	11	14							
9	12	61	10	5	-	-	-	0	4	4							
9	19	61	10	30	0	1	1	0	7	7							
9	26	61	10	5	-	-	-	8	17	25							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE MINNESOTA

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN UPPER PORTION-UPPER MISSISSIPPI

STATION LOCATION MISSISSIPPI RIVER LOCK DAM #3 BELOW ST. PAUL, MINNESOTA 27

DATE OF SAMPLE: MONTH	DAY	YEAR	ALGAE (Number per ml.): TOTAL	BLUE-GREEN: COCCOID	BLUE-GREEN: FILAMENTOUS	GREEN: COCCOID	GREEN: FILAMENTOUS	FLAGELLATES (Pigmented): GREEN	FLAGELLATES (Pigmented): OTHER	DIATOMS: CENTRIC	DIATOMS: PENNATE	INERT DIATOM SHELLS (No. per ml.): CENTRIC	INERT DIATOM SHELLS: PENNATE	DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*): FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE	OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES: PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	DOMINANT GENERA (See Introduction for Identification)
10	4	60	24800	90	270	2110		400	350	21340	220	2680	250	82	50	26	20	56	20	23	10	10	180	20	811	4			48935
11	8	60	7400	90	180	740		360	90	5670	270	1830	130	82	40	56	20	26	10	89	*	30		40	55	8			489--
11	22	60	17200		320	180		530	270	15260	560	1050	20	82	70	26	10	89	10	90	*	10	20	10	26	2			42973
12	13	60	17700		220	270		200	240	16390	330	310	50	82	70	9	*	92	*	91	*	20	110		8				-197-
12	29	60	21400		20	110		110	20	20960	110	1520	70	82	90	92	*								12	1		1	--9--
1	10	61	15500			110		250	40	14950	200	780		82	90	9	*							60	24	3			--9--
1	25	61	15800		50			130	70	15440	160	1210		82	90	92	*	9	*				20	30	29	4	3		--9--
2	14	61	7300			110		310	70	6260	540	1450	40	82	80	26	*	92	*	56	*	20		10	6	2			3-9--
2	28	61	10900			110		420	290	9360	760	180	20	82	90	67	*	9	*			*	50	10	19	4			319--
3	14	61	38400			90		690	490	36190	980	600	40	82	90	9	*	71	*					20	58	2			-1931
3	28	61	40900			2270		840	670	29100	7990	3770	730	82	40	45	10	56	10	26	*	40	180	20	57	2			41963
4	11	61	25700		70	200	20	580	180	23500	1120	1880	270	82	70	56	10	58	*	26	*	20		40	111	18			31973
4	25	61	30400		20	470		270	160	26590	2900	7180	960	82	60	56	20	26	*	58	*	20		10	88	6		1	31963
5	9	61	23100	120	20	1930		1390	80	15710	3890	8510	1100	56	20	82	10	80	10	97	10	50		10	91	10	2	1	41977
5	23	61	28600	20	270	3000		1370	190	19110	4820	5180	850	56	40	82	20	9	10	80	10	30		10	22	1	3		78963
6	13	61	5400	20	250	220		670	490	3460	250	1920	450	56	50	58	20	80	10	82	10	10	20	10	321	57			-19-7
6	27	61	26700	470	130	1720	70	980	600	22270	400	6930	270	58	30	82	20	80	10	56	10	30	20	30	502	68		1	-1927
7	11	61	53300	310	1120	3240		740	310	44990	2610	17340	740	58	40	56	30	26	10	57	*	10	630	10	113	178			48977
7	25	61	31700	120	1040	4600		1080	190	22090	2550	9230	250	26	50	56	20	82	10	47	10	10	150	10	423	563			48967
8	8	61	8000	160	420	1270		620	40	4920	580	7570	380	57	90	26	10	47	*	82	*	*	50	10	999	9			46927
8	22	61	9700	80	230	2010		750	80	5710	870	1410	80	56	90	58	10	47	10	26	*	*	20	20	70	9			78137
9	12	61	7600	190	20	1620		580		4820	370	910	150	56	50	26	20	58	20	20	*	10	20	10	633	79			48937
9	26	61	1900	20	20	150		120	20	1410	190	210	60	56	50	26	20	58	10	82	*	20	4870	30	278	13			4-9-7

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NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE MINNESOTA

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN UPPER PORTION-UPPER MISSISSIPPI

STATION LOCATION MISSISSIPPI RIVER LOCK DAM #3 BELOW ST. PAUL, MINNESOTA 27

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	4	60	10	11	4261	205	44	161	1	12	19	2	2	14	1	5	2	1	4
11	1	60	11	8	4296	224	48	176	2	12	17	2	1	13	1	4	3	1	9
12	6	60	12	13	3663	255	67	188	2	17	25	2	2	20	1	7	4	1	11
1	3	61	1	10	2900	356	97	259	5	24	34	2	2	28	2	12	6	2	14
2	7	61	2	14	3058	351	95	256	2	19	42	2	3	33	4	10	5	2	15
3	7	61	3	14	4964	251	114	137	3	29	34	1	2	28	3	14	11	2	21
4	4	61	4	10	3366	242	67	175	2	18	20	2	2	15	1	7	5	1	14
5	2	61	5	8	3327	219	93	126	2	26	28	3	2	23	0	9	7	2	19
6	6	61	6	13	3857	219	60	159	1	13	22	3	2	15	2	8	6	1	9
7	5	61	7	11	2940	255	103	152	6	27	31	4	3	22	2	17	9	2	11
8	1	61	8	7	3515	249	75	174	3	18	23	3	2	16	2	9	6	2	14
9	5	61	9	7	1175	447	80	367	3	25	27	4	2	20	1	7	4	1	13

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MINNESOTA

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN UPPER PORTION UPPER MISSISSIPPI

STATION LOCATION MISSISSIPPI RIVER LOCK DAM #3 BELOW ST.PAUL, MINNESOTA 27

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	4	60	14.7	7.2	7.9	3.9	28	.8	12.8	.1	-	151	190	20	45	40	.3	265	11000
10	18	60	14.0	8.5	8.2	5.1	30	1.0	11.5	.0	9	156	200	30	50	45	.3	264	1200
10	25	60	9.1	9.9	8.1	4.2	26	.5	11.4	.0	9	152	188	25	40	40	.3	252	15000
11	1	60	9.1	8.1	8.0	3.5	25	.4	-	.5	10	153	184	25	40	36	.5	249	30000
11	8	60	6.5	9.8	8.1	3.1	24	.4	12.9	.6	11	155	184	25	30	33	.7	238	50000
11	15	60	6.5	9.8	8.0	3.2	20	.4	12.5	.5	9	148	172	20	10	27	.5	230	61000
11	22	60	4.5	11.1	8.1	4.3	22	.5	13.8	.5	10	161	184	20	15	28	.5	240	35000
11	29	60	2.1	11.9	8.1	4.9	27	.4	12.2	.1	10	158	184	15	15	30	.5	242	45000
12	6	60	1.0	12.5	8.1	4.2	24	.5	11.6	.3	10	156	178	15	9	28	.5	233	15000
12	13	60	.4	11.5	8.0	4.5	24	.3	-	.9	12	160	188	15	10	30	.7	246	41000
12	20	60	.2	11.2	7.9	4.0	24	.3	12.2	.5	10	158	182	15	10	27	.6	240	1500
1	4	61	.2	10.2	7.9	3.3	23	.4	11.8	.9	13	186	220	15	7	39	.7	295	36000
1	10	61	.3	11.0	7.9	3.3	21	.3	13.7	.8	12	185	216	15	7	29	.7	281	-
1	31	61	.3	8.3	7.8	3.4	23	.5	13.3	1.1	14	193	218	15	10	32	.7	292	8800
2	7	61	.3	6.7	7.7	3.3	21	.3	15.3	1.1	14	188	212	15	7	33	.8	295	790
2	15	61	1.8	7.9	7.8	3.3	20	.3	16.3	1.1	11	178	200	15	10	27	.8	268	8700
2	21	61	1.0	6.8	7.7	3.6	20	.4	17.5	1.2	12	182	202	15	10	28	.8	266	12000
2	28	61	1.8	8.8	7.8	3.3	20	.6	16.0	.9	12	179	190	15	10	27	.9	265	14000
3	14	61	1.8	10.9	7.9	4.6	22	.4	15.0	.6	13	171	202	15	10	40	-	294	19000
3	21	61	3.0	10.6	7.9	4.5	23	-	-	.6	9	148	170	20	20	28	.6	236	13000
3	28	61	3.6	10.3	7.9	5.6	29	.4	15.4	.6	8	150	192	25	55	47	.5	279	84000
4	4	61	4.5	10.1	7.8	3.4	29	.0	13.6	.5	6	127	174	25	120	34	.2	584	39000
4	11	61	5.8	11.4	8.0	3.8	25	.5	12.3	-	7	136	182	20	40	38	.2	262	37000
4	18	61	3.9	12.4	8.0	3.1	23	.8	11.9	.1	8	137	188	20	45	42	.3	267	71000
4	25	61	8.4	9.8	8.0	4.2	29	.4	11.4	.1	8	126	210	20	90	48	.2	283	63000
5	2	61	9.0	10.3	8.2	3.7	30	.7	11.4	.0	7	146	192	30	75	46	.2	272	68000
5	9	61	10.4	8.9	8.0	3.6	31	.3	12.2	.1	7	137	176	35	60	44	.2	251	72000
5	23	61	15.2	8.7	7.9	3.4	35	.7	13.0	.0	6	139	185	35	70	46	.1	262	50000
5	31	61	18.9	7.3	8.0	4.1	44	-	12.0	.1	5	146	220	45	125	75	.1	330	35000
6	6	61	22.0	8.4	8.1	4.3	37	1.1	12.4	.0	7	140	204	50	75	72	.1	320	21000
6	13	61	23.9	5.5	7.8	3.7	33	.2	11.8	.2	9	154	216	40	45	65	.2	310	5300
6	20	61	21.5	7.2	8.0	4.1	34	.5	11.6	.2	9	153	204	40	70	59	.2	308	3700
6	27	61	21.9	8.7	8.1	4.2	32	1.0	8.9	.0	9	138	186	40	45	46	.1	258	100
7	5	61	22.9	8.2	8.3	4.6	32	1.0	9.9	.1	10	140	180	40	55	42	.1	248	1500
7	11	61	24.7	9.9	8.5	6.0	21	1.7	9.5	.0	8	127	160	35	50	38	.1	247	290
7	18	61	24.9	10.5	8.4	5.8	34	2.4	8.1	.1	12	144	164	35	55	46	.1	259	1700
7	25	61	24.4	8.6	8.4	6.7	37	2.5	8.4	.2	14	153	180	35	60	48	.1	283	670
8	1	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*100

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MINNESOTA

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN UPPER PORTION UPPER MISSISSIPPI

STATION LOCATION MISSISSIPPI RIVER LOCK DAM #3 BELOW ST. PAUL, MINNESOTA 27

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
8	8	61	25.9	7.3	8.1	5.3	32	.8	9.7	-	12	156	202	30	35	56	.2	301	620
8	15	61	25.5	7.4	8.2	3.5	29	.1	11.4	.3	10	162	210	30	35	53	.2	306	400
8	22	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
8	29	61	23.4	6.3	8.0	3.6	26	.3	11.6	.7	12	162	200	25	35	48	.4	299	380
9	12	61	21.4	5.5	7.8	4.1	24	.1	12.8	.9	13	161	270	25	45	39	.4	270	710
9	19	61	18.5	8.1	7.9	4.9	23	.3	-	.9	13	-	170	25	30	33	-	253	3000
9	26	61	16.2	5.4	7.7	3.3	20	.2	5.3	1.0	11	158	168	25	30	30	.3	240	30000

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Prescott, Wisconsin
Operated by U.S. Geological Survey

STATE: Minnesota

MAJOR BASIN: Upper Mississippi River

MINOR BASIN: Upper Portion-Upper Mississippi

STATION LOCATION: Mississippi River Lock and Dam #3 below St. Paul, Minnesota

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	11.100	6.460	5.820	5.020	4.120	5.710	25.000	20.700	20.400	7.490	7.060	5.070
2	10.300	5.340	4.850	5.270	4.130	6.980	24.500	19.700	18.700	6.970	6.570	5.580
3	9.900	6.140	5.080	4.970	4.140	7.230	24.700	18.700	18.900	6.670	7.590	4.330
4	9.780	7.950	5.940	5.020	4.080	7.500	24.300	17.500	17.700	6.980	9.670	3.890
5	8.550	8.100	6.660	4.910	4.080	7.610	23.300	17.000	16.200	7.020	9.380	3.930
6	7.930	8.000	7.200	4.820	4.220	7.210	22.200	17.100	14.700	6.250	9.040	5.140
7	8.410	9.120	6.910	5.290	4.170	7.750	19.200	16.900	13.100	6.830	7.270	5.230
8	8.700	6.410	6.260	5.030	4.200	7.580	17.100	16.200	13.300	5.340	7.410	5.630
9	8.270	5.340	6.330	4.860	4.230	7.240	17.000	16.500	12.900	4.220	7.530	6.420
10	7.890	7.860	6.660	4.820	4.230	8.200	15.800	17.200	12.300	4.800	7.760	6.100
11	8.070	7.860	7.000	4.930	4.290	7.660	14.500	17.800	12.400	5.080	6.790	4.090
12	7.960	10.300	6.920	4.910	4.260	8.190	15.100	18.000	12.800	4.910	6.120	5.300
13	7.230	8.830	7.120	5.070	4.430	7.650	15.000	17.800	13.400	5.430	6.130	6.790
14	6.410	7.230	7.370	5.250	4.230	7.560	14.800	17.900	12.000	5.200	5.180	5.200
15	6.600	6.400	7.080	5.340	4.650	7.690	16.400	20.300	10.500	5.150	3.940	4.120
16	6.600	5.160	7.280	5.450	4.780	7.880	14.100	23.600	11.100	5.130	4.510	5.050
17	6.280	8.470	7.290	5.430	5.410	9.580	14.800	29.900	10.900	5.140	4.560	7.630
18	5.910	8.410	7.180	5.540	5.440	9.100	17.500	37.000	10.700	5.600	5.420	7.560
19	4.400	8.340	6.490	5.300	5.240	9.450	17.400	43.900	10.800	4.760	6.930	7.370
20	6.400	7.810	5.970	5.340	5.210	9.850	17.400	45.900	10.400	5.880	5.540	7.670
21	6.340	6.820	5.720	5.000	5.620	10.900	18.800	45.800	10.300	6.950	5.440	7.450
22	3.910	6.900	5.180	4.930	5.950	12.200	22.400	44.700	10.600	7.050	4.990	6.720
23	3.550	6.630	4.810	4.620	6.090	11.400	22.000	43.700	10.000	8.890	4.820	7.060
24	6.960	5.930	4.420	4.200	5.820	10.800	24.800	41.100	9.540	9.440	5.070	5.470
25	7.270	7.240	4.520	3.800	5.280	13.500	26.500	38.700	9.190	10.200	5.140	5.290
26	5.870	7.130	4.560	4.520	5.020	16.200	26.500	35.300	9.230	9.720	4.750	6.230
27	7.860	7.020	4.530	4.330	4.940	16.700	26.000	31.400	8.450	9.210	5.050	3.470
28	7.580	8.070	4.340	3.960	5.370	19.800	24.900	27.500	7.790	8.010	5.480	4.940
29	9.090	7.510	4.800	4.290		22.600	22.300	24.700	7.520	6.550	5.350	6.480
30	8.610	7.330	4.620	4.120		24.000	22.000	23.200	7.570	6.110	5.300	4.310
31	4.870		5.210	4.150		24.700		22.100		7.880	4.820	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE MISSOURI

MAJOR BASIN MISSOURI RIVER

MINOR BASIN LOWER MISSOURI RIVER

STATION LOCATION MISSOURI RIVER AT

ST. LOUIS, MISSOURI 28

DATE SAMPLE TAKEN			DATE OF DETERMINATION		RADIOACTIVITY IN WATER: ALPHA			RADIOACTIVITY IN WATER: BETA			RADIOACTIVITY IN PLANKTON (dry): DATE OF DETERMINATION		GROSS ACTIVITY		RADIOACTIVITY IN WATER: GROSS ACTIVITY		
MO.	DAY	YEAR	MONTH	DAY	SUSPENDED μμc/l	DISSOLVED μμc/l	TOTAL μμc/l	SUSPENDED μμc/l	DISSOLVED μμc/l	TOTAL μμc/l	MO.	DAY	ALPHA μμc/g	BETA μμc/g	SUSPENDED μμc/l	DISSOLVED μμc/l	TOTAL μμc/l
10	10	60*	10	20	-	-	-	2	22	24							
10	24	60*	11	3	0	0	0	0	1	1							
11	7	60*	11	28	-	-	-	10	3	13							
11	28	60*	12	9	7	4	11	12	7	19							
12	12	60*	12	27	-	-	-	0	0	0							
12	27	60*	1	13	1	4	5	0	13	13							
1	9	61*	1	20	-	-	-	8	0	8							
1	30	61*	2	10	1	6	7	0	3	3							
2	14	61*	3	2	-	-	-	0	5	5							
2	27	61*	3	20	21	2	23	0	0	0							
3	6	61	4	4	-	-	-	9	0	9							
3	27	61*	4	13	18	2	20	0	20	20							
4	10	61*	4	24	-	-	-	30	4	34							
4	24	61*	5	15	33	2	35	23	0	23							
5	8	61*	5	24	-	-	-	8	0	8							
5	29	61*	6	12	15	2	17	24	4	28							
6	12	61*	6	27	-	-	-	16	0	16							
6	26	61*	7	28	29	4	33	31	6	37							
7	10	61*	8	2	-	-	-	31	0	31							
7	31	61*	8	29	12	1	13	52	32	84							
8	14	61	9	18	-	-	-	27	30	57							
8	28	61*	9	21	16	1	17	35	10	45							
9	5	61	9	29	-	-	-	1	29	30							
9	11	61	10	10	22	0	22	47	25	72							
9	18	61	10	18	21	1	22	32	18	50							
9	25	61	10	5	-	-	-	61	18	79							

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE MISSOURI
MAJOR BASIN MISSOURI RIVER
MINOR BASIN LOWER MISSOURI RIVER
STATION LOCATION MISSOURI RIVER AT
ST. LOUIS, MISSOURI

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	3	60	900			110		90	20	530	130	290	290										440	10			1		4-9-3
10	17	60	1100			290		130		600	70	770	110	46	30	82	20	26	10	83	10	30	460			1			489--
11	7	60	1000		50	130		140	50	250	400	160	360	46	20	92	10	71	10	65	10	60	180		1	2			--9-6
11	21	60	1700			20		110	40	1300	260	330	350	80	50	46	10	92	*	11	*	30	110	10					--9--
12	5	60	600			50		130	50	130	290	580	270	82	40	84	10	70	10	46	10	40	130						-----
12	19	60	1300			20		50		950	310	90	400	82	50	70	10	58	10	46	*	40	50						--9--
1	3	61	1200			20		140	50	780	200	220	560	82	30	58	10	80	10	70	10	40	200						--9--
1	16	61	2400					290		2010	130	920	200	82	80	80	*	70	*	56	*	10	50						-19--
2	6	61	4800					290		4510	20	510	50										20						--9--
2	20	61	1300				50	50		760	400	290	400	86	10	71	10	82	10	92	10	70	20						--9--
3	6	61	500					20		90	360		310																-----
3	23	61	300					20		90	160	40	290										20						-----
4	3	61	400					70	20	110	250	20	290										50						-----
4	17	61	200			20				20	110		130																-----
5	1	61	1200			130		60	20	460	560	120	210	71	20	46	10	85	10	92	10	60							--963
5	15	61	600			60		40		150	350		210	71	20	86	10	92	10	80	*	60			1				-----
6	5	61	1700		20	170		80		930	500	270	250	46	10	71	10	80	10	26	10	70							4-9--
6	19	61	1100			100		40		350	600	40	100																7-96-
7	3	61	1300	60		270		150		410	410	60	230	71	20	9	10	46	10	80	10	50			3	2	3		--9--
7	17	61	900			160		200	20	400	130	1050	360	26	40	58	20	46	10	56	*	30							4----
8	7	61	1100		20	150		170		270	520		150	47	20	65	10	71	10	58	10	60							-----
8	21	61	1500			170		310		520	500	270	210	47	20	58	20	92	10	46	10	50							--9--
9	5	61	1800			370		350		700	390	100	150	80	20	58	20	47	20	56	10	40							-89--
9	18	61	200					70			140	20	160																-----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE MISSOURI

MAJOR BASIN MISSOURI RIVER

MINOR BASIN LOWER MISSOURI RIVER

STATION LOCATION MISSOURI RIVER AT ST. LOUIS, MISSOURI

28

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
1	2	61	1	16	5483	170	34	136	1	6	14	1	2	10	1	4	2	1	6
1	30	61	2	13	6620	148	27	121	0	6	12	0	1	10	1	3	1	1	4
2	27	61	3	13	3905	243	55	188	0	11	20	1	1	17	1	8	4	1	11
5	8	61	5	22	4720	143	66	77	4	18	14	1	1	11	1	8	6	1	15
6	19	61	7	3	4316	138	45	93	5	13	8	0	1	7	0	6	5	0	8
7	31	61	8	14	5390	111	36	75	1	9	8	1	0	7	0	5	3	1	9
9	15	61	9	30	3175	182	38	144	1	8	13	1	1	9	2	5	3	1	7

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MISSOURI

MAJOR BASIN MISSOURI RIVER

MINOR BASIN LOWER MISSOURI RIVER

STATION LOCATION MISSOURI RIVER AT

ST. LOUIS, MISSOURI 28

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	18.9	8.0	7.8	1.5	46	-	-	-	30	122	184	17	800	113	.4	-	10000
10	10	60	17.8	8.3	8.3	1.2	9	-	-	-	22	157	225	11	250	132	.4	-	4800
10	17	60	18.9	7.9	8.1	1.1	7	-	-	-	23	165	235	12	220	150	.4	-	4300
10	24	60	15.0	8.2	8.1	.8	6	2.4	7.6	.0	26	163	233	11	160	151	.4	453	5300
10	31	60	17.8	8.1	8.2	1.4	9	2.6	5.9	.0	20	168	243	10	180	154	.3	443	11000
11	7	60	11.7	9.6	8.1	3.6	20	3.4	8.0	.0	18	137	195	20	600	115	.3	346	13000
11	14	60	10.0	10.9	8.2	2.1	11	1.9	4.8	.0	23	170	236	12	230	151	.3	426	21000
11	21	60	8.9	11.0	8.3	2.1	10	2.0	6.0	.0	18	168	237	15	210	143	.2	440	26000
11	28	60	13.3	10.6	8.1	2.4	9	2.8	6.7	.0	23	185	250	12	300	149	.2	466	18000
12	5	60	7.2	13.2	8.1	1.8	6	1.5	4.5	.0	32	210	272	10	150	119	.2	465	8000
12	12	60	3.8	1.9	8.0	3.3	6	1.4	4.4	.1	28	205	267	11	160	105	.2	423	1600
12	19	60	3.8	12.2	7.7	3.5	8	2.7	3.6	.0	24	165	235	9	190	85	.2	347	3500
12	26	60	-	-	-	-	-	2.4	3.0	.3	-	-	-	-	-	-	-	378	-
12	28	60	2.8	12.3	8.0	4.4	7	-	-	-	30	216	292	11	170	105	.0	-	-
1	2	61	-	-	-	-	-	2.7	4.8	.3	-	-	-	-	-	-	-	390	-
1	3	61	3.3	12.1	8.2	4.2	-	-	-	-	33	230	305	12	150	114	.1	-	-
1	9	61	5.6	12.8	8.0	4.3	-	3.0	4.4	.4	35	278	294	11	100	132	.1	494	1300
1	16	61	6.1	11.9	8.0	3.7	-	3.0	4.7	.3	35	205	277	11	90	111	.1	470	1600
1	23	61	2.2	13.1	8.2	5.1	-	2.6	4.6	.3	34	205	270	10	95	123	.3	511	260
1	30	61	2.2	13.1	8.2	5.1	-	1.8	3.6	.3	26	205	270	10	95	110	.0	461	600
2	6	61	2.2	13.1	-	3.8	-	2.6	3.9	.3	33	238	298	9	50	116	.0	489	760
2	13	61	-	-	-	-	-	3.9	5.5	.5	-	-	-	-	-	-	-	558	1900
2	14	61	2.2	11.5	8.1	5.3	13	-	-	-	40	216	285	12	140	157	.1	-	-
2	20	61	4.4	10.1	8.2	3.9	22	4.0	7.8	.3	25	164	213	15	600	97	.1	371	10000
2	27	61	6.7	10.6	8.1	5.4	36	4.7	9.7	.3	18	121	167	26	1300	60	.0	274	12000
3	6	61	8.9	9.2	7.9	4.6	43	3.8	8.9	.2	18	140	190	20	1100	79	.0	351	5600
3	13	61	7.2	9.3	8.2	4.4	46	4.7	9.0	.3	10	100	136	26	1500	33	.0	196	18000
3	20	61	5.6	9.0	8.1	4.1	85	3.9	11.3	.3	7	95	127	26	2000	59	.0	231	17000
3	27	61	10.0	9.4	8.0	3.0	59	3.0	9.9	.2	10	110	151	25	1000	48	.3	224	15000
4	3	61	8.9	8.9	8.0	2.9	55	2.9	11.8	.1	9	106	139	25	1400	50	.3	226	40000
4	10	61	9.4	9.8	8.1	3.0	50	2.7	6.7	.1	12	142	186	17	600	60	.3	305	11000
4	17	61	9.4	9.7	8.0	3.1	66	2.9	10.7	.0	11	113	155	22	1100	66	.3	231	11000
4	24	61	11.7	8.1	8.1	1.2	18	2.7	9.0	.0	13	139	190	16	450	80	.3	302	8500
5	1	61	14.4	8.5	7.8	1.7	28	2.7	9.0	.0	13	133	180	19	500	86	.3	343	2500
5	8	61	16.1	7.5	8.0	4.0	89	5.0	10.8	.1	5	79	94	40	1650	38	.3	241	33000
5	15	61	16.1	7.2	8.1	1.3	35	3.8	10.0	.1	5	85	108	27	650	24	.3	144	1800
5	22	61	16.7	7.7	8.2	2.3	97	3.4	9.0	.1	10	106	145	22	400	62	.4	246	2900
5	29	61	16.1	7.5	7.9	1.6	40	3.4	13.0	.0	10	111	140	25	1400	480	3.0	231	70
6	5	61	22.8	7.0	8.2	1.0	7	2.8	11.0	.1	14	136	180	22	600	76	.3	294	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MISSOURI

MAJOR BASIN MISSOURI RIVER

MINOR BASIN LOWER MISSOURI RIVER

STATION LOCATION MISSOURI RIVER AT
ST. LOUIS, MISSOURI 28

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
6	12	61	25.0	6.2	8.3	.8	38	3.0	12.4	.1	18	136	185	25	1400	75	.5	312	7700
6	19	61	22.2	6.1	8.2	1.7	80	2.9	12.1	.0	14	124	173	22	2000	74	.1	282	35000
6	26	61	23.9	7.2	8.1	1.0	31	3.0	14.0	.1	20	140	188	18	900	99	.0	324	11000
7	3	61	24.4	6.6	8.1	–	26	3.5	13.0	.0	19	142	203	20	900	92	.3	335	9500
7	10	61	23.3	5.3	8.1	1.7	37	6.0	17.0	.0	19	125	173	20	1600	73	.0	306	12000
7	17	61	26.1	7.1	8.3	.9	9	2.3	11.0	.0	23	154	222	16	350	88	.0	369	2500
7	24	61	25.6	6.9	8.1	1.0	24	3.4	13.0	.1	18	128	175	18	550	80	.0	487	8000
7	31	61	26.7	5.6	8.2	.6	548	3.6	15.0	.1	9	98	138	25	1150	40	.0	227	5800
8	7	61	28.9	6.0	8.2	1.4	270	3.2	14.1	.0	18	120	175	18	640	81	.0	308	10000
8	14	61	28.3	6.7	8.3	1.2	107	2.6	9.9	.0	20	145	212	15	350	108	.0	352	2500
8	21	61	27.2	7.0	8.2	1.1	11	2.6	11.0	.0	27	158	222	16	500	145	.0	442	10000
8	28	61	26.7	6.7	8.3	1.0	19	2.9	13.0	.1	25	148	225	15	600	154	.1	407	12000
9	5	61	28.3	7.0	8.4	1.2	16	–	–	–	23	154	230	14	350	150	.0	–	–
9	11	61	25.6	6.8	8.1	1.2	22	3.3	14.0	.1	18	120	168	16	900	94	.3	308	20000
9	18	61	18.6	4.5	8.1	1.7	54	4.6	15.0	.2	8	85	105	24	1350	36	.2	170	47000
9	25	61	20.6	7.3	7.9	.9	25	–	–	–	8	106	142	24	800	64	.2	–	10000
9	26	61	–	–	–	–	–	2.9	12.6	.1	–	–	–	–	–	–	–	232	–

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Hermann, Missouri
Operated by U.S. Geological Survey

STATE Missouri

MAJOR BASIN Missouri River

MINOR BASIN Lower Missouri River

STATION LOCATION Missouri River at St. Louis, Missouri

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	55.500	45.500	27.000	32.500	13.400	41.300	148.000	83.500	97.500	70.500	66.200	52.400
2	50.600	68.400	27.300	29.100	13.200	38.000	132.000	91.200	94.000	72.600	66.700	51.000
3	47.700	75.400	27.300	24.900	12.800	39.300	111.000	107.000	91.800	60.000	70.500	48.600
4	45.500	66.700	27.300	23.000	14.000	42.800	98.100	117.000	87.900	53.000	81.000	48.300
5	43.700	57.000	26.100	22.800	15.000	42.500	87.900	125.000	81.500	50.000	87.900	62.200
6	41.900	52.000	25.300	24.400	13.600	39.600	79.000	192.000	84.000	55.800	77.600	104.000
7	41.000	46.700	24.900	24.400	14.400	51.300	71.400	252.000	89.000	74.900	64.600	98.100
8	40.400	44.600	26.100	24.200	15.700	88.400	64.200	323.000	79.500	105.000	56.600	81.500
9	40.200	46.100	27.300	23.700	17.000	114.000	67.500	385.000	78.000	98.100	55.800	77.200
10	39.900	43.700	29.100	22.800	17.400	113.000	120.000	401.000	80.500	74.900	58.400	67.100
11	39.300	43.100	29.900	22.500	17.800	99.300	162.000	382.000	83.000	62.200	55.500	55.200
12	38.800	43.100	30.900	23.000	18.700	84.000	185.000	369.000	77.200	59.600	53.800	47.700
13	38.800	42.200	34.400	23.000	26.100	93.400	185.000	323.000	70.500	57.000	51.300	53.000
14	38.800	41.300	41.900	23.900	33.000	111.000	183.000	276.000	69.600	53.000	52.400	161.000
15	39.000	41.600	40.700	24.400	34.400	152.000	183.000	230.000	71.400	52.700	57.700	263.000
16	39.900	47.700	36.600	23.500	36.300	170.000	166.000	206.000	94.000	54.800	55.500	268.000
17	41.300	49.300	33.800	23.500	30.900	150.000	149.000	200.000	118.000	55.500	48.300	274.000
18	40.400	49.000	31.700	27.800	28.800	144.000	130.000	206.000	123.000	60.000	42.500	271.000
19	41.300	48.000	27.300	28.600	31.700	142.000	111.000	190.000	107.000	77.600	39.600	246.000
20	41.300	44.900	27.000	24.900	35.500	125.000	98.100	178.000	87.900	73.100	39.900	214.000
21	40.700	42.800	32.000	24.400	55.200	123.000	85.700	167.000	73.100	59.600	39.600	187.000
22	40.200	41.300	33.300	23.900	60.000	126.000	86.800	144.000	64.600	64.200	39.600	168.000
23	39.900	39.900	33.000	22.100	52.700	124.000	108.000	120.000	62.200	86.800	40.200	151.000
24	39.900	38.500	32.200	21.600	44.900	125.000	128.000	114.000	63.400	125.000	45.500	136.000
25	40.200	36.000	27.800	21.000	41.300	120.000	140.000	118.000	61.400	115.000	54.400	165.000
26	40.400	32.700	22.500	19.000	43.100	106.000	166.000	149.000	58.800	148.000	56.600	197.000
27	40.700	29.900	19.200	16.000	48.000	92.800	154.000	150.000	56.600	162.000	54.100	186.000
28	39.300	27.600	18.100	14.000	47.000	106.000	131.000	139.000	54.400	137.000	51.600	157.000
29	38.800	26.300	23.900	11.000		164.000	111.000	131.000	53.000	111.000	48.300	133.000
30	38.800	26.100	26.600	11.500		181.000	93.400	120.000	55.800	91.800	49.600	109.000
31	39.300		27.600	11.000		168.000		107.000		74.400	52.400	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE KANSAS

MAJOR BASIN MISSOURI RIVER

MINOR BASIN LOWER MISSOURI RIVER

STATION LOCATION MISSOURI RIVER AT

KANSAS CITY, KANSAS

29

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	24	60*	11	14	2	5	7	1	0	1									
11	28	60*	12	5	1	5	6	0	0	0									
12	19	60*	1	13	3	3	6	0	5	5									
1	30	61*	2	8	0	4	4	0	4	4									
2	27	61*	3	9	20	3	23	18	3	21									
3	27	61*	4	10	86	1	87	477	0	477									
4	24	61*	5	4	9	5	14	0	0	0									
5	29	61*	6	9	13	4	17	23	0	23									
6	26	61*	7	21	18	4	22	22	0	22									
7	31	61*	8	10	2	3	5	5	0	5									
8	28	61*	9	12	4	3	7	17	19	36									
9	5	61	9	29	-	-	-	161	4	165									
9	18	61	10	18	6	0	6	22	11	33									
9	25	61	11	3	-	-	-	152	23	175									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE KANSAS

MAJOR BASIN MISSOURI RIVER

MINOR BASIN LOWER MISSOURI RIVER

STATION LOCATION MISSOURI RIVER AT KANSAS CITY, KANSAS

29

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
			TOTAL	BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR		COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	3	60	1900			330		200	20	1020	310	1070	460	46	30	82	80	26	10	78	20	30	330						4893-
10	17	60	1700			160		110	20	1150	290	1030	420	82	20	26	10	80	10	46	10	60	130						-49--
11	7	60	1900			130		50		1100	580	720	720	46	30	80	10	78	10	71	10	50	340						--9-6
11	14	60	1100			20		20	70	740	250	200	470	80	50	46	10	82	10	78	10	30	110						--9--
12	5	60	1800			70		70		1360	270	310	470	82	50	70	10	46	10	67	*	30	160						--9--
12	12	60	1300			20		90		1040	140	160	310	82	40	84	20	70	10	46	10	20	90						--9--
1	3	61	700			20		220	20	450	20	360	130	82	60	70	10	46	10	71	*	30	70						--9--
1	16	61	300			20		40		50	180	220	310	82	20	46	10	70	10	45	10	50							-----
2	6	61	700					20	20	580	50	50																	--9--
2	20	61	600					20			630		70	86	50	71	10	46	*	70	*	30							---63
3	6	61	700							70	590		420																---6-
3	20	61	400					40			330	90	220	82	40	26	30	70	10	71	*	20	20						-----
4	3	61	600					180	20	130	290	310	270																-----
4	17	61	800					130		110	540	110	400	82	20	86	10	71	10	46	10	60							-----
5	1	61	5500			540		950		2030	2030	1260	700	46	20	47	10	71	10	92	10	50							71963
6	12	61	1100			70		20		490	540	160	490	71	40	92	10	80	10	9	10	30							--96-
6	19	61	200					40		90	110	50	130																-----
7	3	61	1000					70		600	290	310	420																--9-7
7	17	61	3800			990		440		1430	910	1620	680	58	20	26	20	56	10	80	10	40							48963
8	7	61	700			70		200		310	110	420	380	47	20	58	10	26	10	71	10	50	20						4----
8	28	61	2600		20	640		460		620	850	560	370	46	10	80	10	58	10	71	10	60							-8926
9	5	61	200					70		70	20		110	71	10	54	10	26	10	80	10	60							-----
9	18	61	600			40				190	350	20	100										20						-----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE	KANSAS
MAJOR BASIN	MISSOURI RIVER
MINOR BASIN	LOWER MISSOURI RIVER
STATION LOCATION	MISSOURI RIVER AT KANSAS CITY, KANSAS

29

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	11	60	10	27	5362	88	7	81	0	1	5	1	1	3	0	1	0	0	0
10	31	60	11	14	4975	90	16	74	0	2	9	2	1	6	0	1	1	0	3
11	15	60	11	28	5085	119	11	108	0	1	7	1	1	5	0	1	1	0	1
11	30	60	12	14	5383	115	15	100	0	1	11	3	1	7	0	1	0	0	2
12	19	60	1	3	5896	78	17	61	0	1	12	2	2	8	0	2	0	0	2
1	5	61	1	19	5279	149	50	99	2	10	15	3	2	10	0	14	3	1	5
1	19	61	1	30	4565	162	25	137	0	4	13	2	1	9	1	3	1	1	3
2	9	61	2	19	4442	139	21	118	0	2	14	4	2	7	1	2	1	0	2
2	20	61	3	6	4174	162	25	137	0	2	12	2	1	8	1	2	1	1	7
3	9	61	3	20	2823	189	35	154	0	5	18	3	2	13	0	4	1	1	6
3	23	61	4	6	4225	134	16	118	0	2	10	2	2	6	0	2	1	0	1
4	6	61	4	20	4338	128	32	96	0	7	16	4	2	9	1	4	2	1	2
4	28	61	5	11	4542	105	37	68	1	10	10	2	1	7	0	4	3	1	8
5	18	61	6	1	4851	78	24	54	0	6	10	2	1	6	1	3	2	0	3
6	1	61	6	15	3768	82	13	69	0	1	10	4	2	4	0	2	0	0	0
6	27	61	7	10	3530	85	29	56	1	8	12	5	2	5	0	3	2	0	3
7	11	61	7	24	4260	84	14	70	0	2	9	3	1	5	0	2	1	0	0
8	1	61	8	17	5090	57	19	38	1	5	7	2	1	4	0	2	1	0	3
8	24	61	9	7	4729	77	17	60	0	3	8	2	1	5	0	2	1	1	2
9	13	61	9	28	5076	68	10	58	0	1	7	2	1	4	0	1	0	0	1

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE KANSAS

MAJOR BASIN MISSOURI RIVER

MINOR BASIN LOWER MISSOURI RIVER

STATION LOCATION MISSOURI RIVER AT

KANSAS CITY, KANSAS 29

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	17.6	7.7	7.9	2.2	21	3.3	9.0	.0	15	161	227	10	300	157	-	439	21000
10	11	60	18.1	7.7	8.0	2.3	17	2.1	8.8	.0	17	163	236	8	220	170	-	464	17000
10	17	60	17.2	7.8	8.0	2.2	21	2.2	6.8	.0	17	166	233	10	350	165	-	456	21000
10	24	60	11.7	9.3	7.9	2.1	13	-	-	.0	16	169	239	6	230	175	-	466	35000
11	7	60	7.8	10.2	8.1	1.8	27	2.0	5.9	.0	16	171	238	7	260	171	-	467	6000
11	14	60	6.8	11.0	8.1	2.0	21	1.8	6.4	.1	17	175	239	5	250	177	-	477	32000
11	21	60	6.1	10.8	8.1	2.5	17	1.7	6.3	.0	17	173	241	5	210	174	-	495	38000
11	28	60	6.4	10.7	8.0	3.4	4	2.4	-	.1	22	210	265	5	170	153	-	490	19000
12	5	60	4.5	11.8	8.1	4.4	48	2.7	6.7	.2	22	219	277	5	200	150	-	505	18000
12	12	60	.2	12.0	8.0	4.6	37	2.7	6.5	.2	21	199	260	5	250	137	-	460	6000
12	19	60	.0	12.6	8.0	5.3	32	3.1	6.9	.3	23	212	277	5	130	155	-	499	15000
1	3	61	.0	12.9	8.0	3.7	37	.6	6.8	.4	26	216	301	5	95	172	-	534	6700
1	9	61	.5	12.5	8.0	3.7	35	.7	6.8	.3	23	213	267	4	105	229	-	503	13000
1	16	61	1.3	12.4	8.0	3.4	30	.7	6.5	.3	25	207	257	3	95	148	-	485	5300
1	23	61	.0	13.3	8.1	2.5	18	.7	5.5	.3	25	206	280	5	75	159	-	502	13000
1	30	61	.0	-	7.9	1.2	8	.6	5.5	.4	23	219	301	4	10	165	-	542	4700
2	6	61	.0	-	7.9	1.2	27	.4	7.0	.6	33	214	284	4	15	180	-	556	3400
2	13	61	.0	10.7	8.0	5.5	41	.4	10.2	.4	25	181	240	4	220	143	.3	454	1300
2	20	61	.5	10.7	7.8	7.8	139	.9	7.7	.4	16	137	181	8	2700	93	.3	338	9000
2	27	61	1.9	10.4	7.9	8.2	93	.9	13.7	.5	17	144	192	25	1700	94	.4	359	4900
3	6	61	3.2	9.4	7.8	7.3	98	1.5	11.0	.5	15	161	183	20	1600	93	.3	338	16000
3	13	61	4.9	9.0	7.8	5.5	184	1.3	10.6	.6	15	136	164	25	4000	69	.2	290	38000
3	20	61	4.5	9.2	7.7	7.7	106	.8	10.8	.6	11	130	164	25	1900	63	.3	277	60000
3	27	61	8.5	9.0	7.9	5.4	130	.6	6.9	.4	-	141	173	18	2000	71	.3	287	24000
4	3	61	7.1	9.5	7.9	3.8	59	2.0	9.0	.2	10	144	183	17	900	76	.3	306	22000
4	10	61	6.8	10.1	8.0	3.7	41	2.9	8.0	.1	14	167	221	8	510	114	.3	392	18000
4	17	61	7.7	10.2	8.0	3.0	43	2.8	8.2	.1	13	156	215	8	700	113	.3	378	22000
4	24	61	17.6	7.8	8.0	2.8	41	2.5	9.5	.1	16	170	241	7	620	139	.3	412	63000
5	1	61	12.6	8.9	7.8	2.3	24	1.9	7.2	.0	16	177	255	3	270	159	.3	470	34000
5	8	61	13.5	6.9	7.7	5.4	125	.9	6.9	.2	12	183	183	8	2500	108	.2	342	110000
5	29	61	19.7	7.6	8.1	2.6	28	2.5	-	.1	16	180	248	2	390	143	.1	436	5300
6	12	61	25.3	5.6	8.1	2.5	71	1.9	9.0	.1	18	166	222	8	1700	135	.5	417	20000
6	19	61	22.4	5.5	7.7	3.0	138	.6	4.6	.0	15	142	190	12	2700	98	.4	327	32000
6	26	61	23.6	6.6	8.0	2.6	31	2.6	10.0	.5	17	174	241	8	420	147	.6	438	5000
7	3	61	27.5	5.2	7.8	2.2	62	2.0	8.0	.4	18	160	229	8	950	149	.4	428	22000
7	10	61	25.5	5.8	8.0	1.8	36	3.2	10.0	1.6	16	148	222	8	600	146	.3	422	7000
7	17	61	25.1	-	8.0	-	-	-	-	-	20	161	233	7	270	162	-	455	14000
7	24	61	24.7	5.2	7.8	2.9	83	1.2	5.0	.1	15	143	207	7	1500	138	.3	387	35000
7	31	61	28.1	4.8	7.9	1.9	35	3.0	11.7	.1	17	159	233	5	650	164	.4	447	6000

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE KANSAS

MAJOR BASIN MISSOURI RIVER .

MINOR BASIN LOWER MISSOURI RIVER

STATION LOCATION MISSOURI RIVER AT KANSAS CITY, KANSAS

29

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
8	7	61	28.3	5.8	7.8	1.3	31	2.5	9.0	.0	17	158	217	7	500	152	.4	439	41000
8	28	61	24.3	6.5	7.9	1.6	25	2.2	9.0	.0	15	152	224	6	440	168	.3	441	–
9	5	61	21.4	4.9	7.7	3.0	47	.6	6.8	.8	12	128	161	8	2100	121	.3	329	50000
9	18	61	17.0	7.0	7.8	2.2	38	3.5	10.5	.1	11	120	164	8	700	108	.2	322	18000
9	25	61	15.5	7.4	7.9	3.2	52	1.1	7.0	.1	15	148	198	5	1300	117	.2	393	160000

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Kansas City, Missouri
Operated by U.S. Geological Survey

STATE Kansas

MAJOR BASIN Missouri River

MINOR BASIN Lower Missouri River

STATION LOCATION Missouri River at Kansas City, Kansas

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	43.600	46.000	19.600	17.700	87.200	38.600	66.400	40.700	71.900	48.000	39.500	36.700
2	41.000	43.300	19.100	18.100	11.200	31.700	58.000	40.400	72.400	46.300	46.600	37.000
3	39.200	40.400	18.500	18.300	12.100	31.000	48.000	40.400	68.200	52.600	53.400	53.000
4	37.800	39.200	17.500	19.100	12.200	33.000	40.700	41.000	71.000	48.400	50.200	72.400
5	37.800	38.300	18.100	19.800	12.400	35.300	40.700	50.200	67.300	44.600	43.300	56.800
6	38.000	38.000	19.100	19.800	13.000	42.600	41.600	91.800	60.000	78.600	38.900	56.800
7	37.000	38.000	19.400	18.900	15.600	41.600	42.300	99.000	58.000	68.600	34.500	51.600
8	36.400	37.500	19.800	17.900	16.500	41.000	44.200	105.000	69.600	56.000	35.800	44.900
9	36.100	37.200	20.600	17.900	17.700	39.200	52.600	101.000	70.500	48.000	37.200	40.100
10	36.100	37.000	22.300	18.100	18.100	37.000	71.900	84.000	66.800	44.200	36.700	39.500
11	35.800	37.000	22.700	18.500	18.300	35.600	74.300	65.500	61.200	43.000	37.500	38.000
12	35.300	37.000	20.200	18.500	24.700	38.600	74.800	53.800	60.400	41.600	45.600	38.900
13	35.800	37.000	18.900	18.700	34.800	67.300	91.200	49.400	61.200	41.600	48.400	126.000
14	37.200	36.400	18.900	18.900	24.500	101.000	80.500	46.600	70.000	43.900	43.300	162.000
15	37.000	36.600	19.400	18.900	20.800	76.200	72.800	46.000	85.000	43.300	38.000	118.000
16	38.300	37.000	20.600	20.000	22.100	66.400	67.800	44.200	98.400	42.000	36.400	103.000
17	38.900	35.800	20.800	19.600	24.300	68.200	60.400	46.600	95.400	40.100	36.400	84.500
18	38.600	36.400	20.800	19.100	28.600	66.400	52.600	54.200	76.200	38.300	36.700	73.800
19	38.000	35.800	22.100	18.500	36.100	62.000	47.400	57.200	63.300	39.500	36.700	66.800
20	37.200	34.200	22.100	18.300	33.700	56.000	44.200	51.200	57.600	42.000	37.000	66.400
21	37.200	32.000	20.200	18.100	29.300	53.800	45.200	50.800	60.000	49.100	40.100	68.200
22	37.200	29.100	18.500	17.500	28.200	53.800	49.100	53.400	58.800	52.300	48.000	65.000
23	37.200	25.600	21.900	16.300	28.200	54.900	50.500	72.400	56.800	53.800	49.100	58.000
24	37.200	24.500	19.800	13.300	33.400	53.400	49.100	113.000	53.800	68.200	47.700	69.600
25	37.200	23.600	17.700	9.860	35.000	50.500	46.600	105.000	51.200	62.500	48.000	66.800
26	37.000	22.500	13.100	7.800	31.000	53.000	47.700	96.000	48.800	59.200	44.600	61.600
27	36.100	21.900	12.600	7.650	29.100	80.500	44.600	88.400	49.400	56.400	39.800	54.500
28	36.100	21.700	12.800	7.090	33.700	97.800	42.600	79.500	51.900	51.600	36.700	48.800
29	37.000	21.400	23.200	6.050		88.400	41.300	77.600	58.000	46.600	37.500	46.000
30	40.700	20.600	17.900	5.440		73.300	41.000	72.400	53.400	48.400	38.000	47.000
31	46.600		17.100	6.180		70.500		69.600		44.200	37.000	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE MISSOURI

MAJOR BASIN MISSOURI RIVER

MINOR BASIN LOWER MISSOURI BELOW NIOBRARA RIVER

STATION LOCATION MISSOURI RIVER AT ST. JOSEPH, MISSOURI 30

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	2	60*	10	13	21	6	27	56	0	56								
10	24	60*	11	3	4	7	11	0	1	1								
11	28	60*	12	7	7	6	13	0	4	4								
12	27	60*	1	9	1	6	7	0	5	5								
1	23	61*	2	21	0	4	4	0	0	0								
2	27	61*	3	14	6	4	10	0	2	2								
3	27	61*	4	11	96	2	98	149	0	149								
4	24	61*	5	10	8	3	11	19	8	27								
5	29	61*	6	6	3	5	8	19	0	19								
6	26	61*	6	13	2	0	2	20	0	20								
7	31	61*	8	18	25	3	28	62	0	62								
8	28	61*	9	13	11	4	15	8	29	37								
9	11	61	10	5	-	-	-	22	12	34								
9	24	61	11	7	16	5	21	84	14	98								

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE MISSOURI

MAJOR BASIN MISSOURI RIVER

MINOR BASIN LOWER MISSOURI BELOW NIOBRARA RIVER

STATION LOCATION MISSOURI RIVER AT

ST. JOSEPH, MISSOURI 30

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	3	60	2800			570		240	110	1610	310	520	220	82	30	46	20	26	10	56	*	30	180						4893-
10	18	60	3400			780		270	70	1860	380	1360	760	82	30	46	10	26	10	56	10	50	110						4893-
11	7	60	2000			70		70		1370	460			46	30	80	20	71	10	98	10	40	20						--9-6
11	18	60	2000		20	40		70	20	1430	440	110	400	46	20	80	20	71	20	92	10	30	90			1			--9--
11	23	60	5600		20	110		110		2440	2900	300	590	82	30	46	10	80	10	70	*	50							--9--
12	2	60	3700			20		50	20	3020	550	180	420	46	20	71	20	82	10	92	*	50	90						--966
12	15	60	2700			50		200	50	19800	400	240	510	82	40	46	10	70	20	71	*	30	150				1		-19--
1	3	61	600					160		360	90	270	270	82	40	70	10	46	10	84	*	40	110				2		--9--
1	16	61	400				20	20		160	180	70	270	82	30	46	20	70	10	71	*	40					2		-----
1	30	61	1600					130		150		160	70	82	60	64	10	26	*	70	*	30	20						--9--
2	14	61	200					70		70	270	20	310	71	30	46	10	86	*	92	*	50					2		-----
3	3	61	800			20		20		110	670	180	1070	71	40	46	20	92	10	65	*	30							---6-
3	20	61	400					20			340		310																---6-
4	4	61	1100			20		490	50	340	240	130	310										20						--9--
4	17	61	1600			20		250		720	650	1030	740	82	30	9	10	46	10	86	10	50					3		3-966
5	1	61	3700			270		670	20	1140	1560	1500	580	82	30	71	10	46	10	9	10	40	40						3196-
5	15	61	6500			270		1720	20	1560	2970	1610	1450	92	20	46	10	71	10	45	10	50							71963
6	1	61	20300			2430		1100		12690	4100	1100	640	9	20	46	10	80	10	82	10	50			2	10			48963
6	19	61	400			50				50	290	20	470																------
7	7	61	400					40		340	70	110	180																--9--
7	19	61	2200		20	580		160	50	920	470	2500	720	26	30	9	10	56	10	80	10	50	70						48--5
8	7	61	3800			850		520		1140	1280	290	410	47	20	46	10	58	10	83	10	40							-8967
8	21	61	1500	20		330		210		290	660	190	170	58	10	47	10	71	10	80	10	60							--963
9	5	61	1900			430		580	20	600	310	1200	270	47	20	46	20	26	20	80	10	40	20						489--
9	18	61	2100			310		230		870	640	270	230																489-3

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(*Parts per billion*)

STATE MISSOURI
MAJOR BASIN MISSOURI RIVER
MINOR BASIN LOWER MISSOURI BELOW NIOBRARA RIVER
STATION LOCATION MISSOURI RIVER AT
ST. JOSEPH, MISSOURI 30

DATE OF SAMPLE						EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY	GALLONS FILTERED	TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	3	60	10	16	5535	135	23	112	1	6	7	1	1	5	0	2	2	1	4
10	17	60	10	30	5595	88	16	72	0	2	7	1	1	5	0	2	1	0	4
11	14	60	11	27	4305	226	28	198	0	4	14	2	1	10	1	4	1	1	4
12	27	60	1	7	4507	176	40	136	1	8	13	2	1	9	1	9	2	0	7
1	23	61	2	4	5535	154	33	121	2	7	13	2	2	8	1	3	2	1	5
2	21	61	3	5	4700	252	72	180	1	17	22	1	1	18	2	9	7	1	15
3	20	61	4	1	5812	108	18	90	0	4	6	1	0	5	0	3	1	1	3
4	17	61	4	30	4687	147	35	112	2	9	8	1	1	6	0	4	3	1	8
5	30	61	6	7	2100	242	52	190	1	14	18	5	2	10	1	6	4	1	8
7	3	61	7	17	3825	246	75	171	5	19	19	2	1	14	2	8	8	2	14
7	31	61	8	13	5295	99	33	66	1	8	9	1	1	7	0	4	4	0	7
9	7	61	9	18	5715	123	26	97	0	6	10	1	1	7	1	3	2	0	5

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MISSOURI

MAJOR BASIN MISSOURI RIVER

MINOR BASIN LOWER MISSOURI BELOW NIOBRARA RIVER

STATION LOCATION MISSOURI RIVER AT ST. JOSEPH, MISSOURI

30

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	2	60	17.0	7.8	8.5	1.1	-	4.6	-	.1	25	182	226	-	240	164	-	448	-
10	4	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2100
10	10	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1400
10	12	60	15.5	8.1	8.0	1.7	-	3.2	-	.1	20	182	226	-	250	164	-	448	-
10	16	60	16.6	8.5	8.0	1.3	-	3.2	-	.1	18	168	226	15	200	156	-	440	-
10	17	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3800
10	24	60	11.1	8.9	8.0	1.8	-	2.2	-	.1	17	165	208	8	200	153	-	378	-
10	30	60	11.6	8.6	8.0	-	-	2.5	-	.1	18	140	200	10	115	147	-	360	-
10	31	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23000
11	3	60	10.0	8.6	7.9	1.5	-	2.0	-	.1	18	166	232	0	220	-	-	360	-
11	8	60	6.6	11.0	7.8	2.0	-	2.4	5.5	.2	17	176	220	0	220	166	-	399	-
11	16	60	6.6	10.4	-	1.7	-	2.5	5.5	.1	17	172	232	-	200	168	-	360	-
11	21	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1100
11	22	60	5.6	10.4	8.0	1.5	-	2.5	-	.1	18	176	220	-	180	172	-	360	-
11	28	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8600
11	30	60	5.5	12.0	8.0	1.8	-	3.0	6.0	.1	23	200	260	0	180	143	.1	468	-
12	5	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1800
12	7	60	.7	12.3	8.0	2.9	-	3.5	5.0	.1	25	220	260	-	185	-	.1	-	-
12	17	60	1.1	12.3	8.0	2.7	-	3.6	5.0	.3	30	214	280	-	150	136	.1	507	-
12	21	60	1.1	13.0	7.9	2.3	-	3.6	5.5	.3	36	188	276	-	100	210	.7	576	-
12	27	60	1.1	12.0	8.0	1.3	-	-	-	.6	32	200	310	-	25	-	.8	-	-
1	3	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	700
1	5	61	1.1	12.6	8.0	2.0	-	4.0	6.5	.3	35	224	296	-	60	-	.1	-	-
1	9	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
1	12	61	1.1	12.7	8.0	2.0	-	3.0	5.5	.2	33	212	256	0	60	131	.5	496	-
1	16	61	1.1	13.8	8.0	3.8	-	3.5	5.0	.6	30	196	248	-	50	141	.2	476	-
1	23	61	1.1	-	8.0	-	-	3.6	-	.5	35	210	256	-	25	152	.3	510	200
1	29	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*100
1	31	61	1.1	-	8.0	-	-	3.0	-	.5	37	222	262	-	25	-	.3	510	-
2	6	61	1.1	-	7.8	-	-	-	-	.4	30	280	324	0	20	159	.2	616	1000
2	10	61	1.1	12.6	8.0	3.4	-	4.6	-	.6	33	256	366	-	25	-	.2	-	-
2	13	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*100
2	16	61	2.2	12.1	-	2.1	-	-	-	.3	34	184	232	-	25	-	.2	-	-
2	20	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	550
2	25	61	3.3	10.6	7.9	3.0	-	-	-	.2	28	154	244	-	1200	95	.2	405	-
2	27	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*100
3	1	61	3.3	12.2	8.0	2.4	-	6.0	8.0	.4	32	148	218	5	590	100	.2	-	-
3	6	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27000
3	9	61	4.4	-	7.6	-	-	6.5	8.0	.8	27	140	210	15	750	-	.6	-	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MISSOURI
MAJOR BASIN MISSOURI RIVER
MINOR BASIN LOWER MISSOURI BELOW NIOBRARA RIVER
STATION LOCATION MISSOURI RIVER AT ST. JOSEPH, MISSOURI 30

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
3	13	61	4.4	9.2	-	1.8	-	-	-	.8	27	-	108	200	5000	-	.4	-	14000
3	20	61	4.4	9.2	7.2	9.2	-	-	-	1.0	26	140	144	15	3350	60	.5	346	36000
3	27	61	4.4	8.8	8.0	-	-	6.0	8.0	.5	23	138	170	15	2500	-	.8	-	-
3	28	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1700
4	4	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45000
4	5	61	4.4	10.0	7.6	2.7	-	-	-	.3	23	170	220	10	1200	-	.2	-	-
4	10	61	6.7	10.6	7.8	4.0	-	3.3	5.0	.2	19	120	210	-	500	-	.7	356	7000
4	17	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14000
4	19	61	8.3	10.6	8.0	3.6	-	-	-	.3	22	180	228	-	500	130	.2	325	-
4	24	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18000
4	28	61	13.3	9.8	7.9	2.4	-	-	-	.3	23	168	240	10	350	-	.5	386	-
5	1	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5400
5	4	61	12.2	9.2	7.9	1.6	-	-	-	.2	22	186	230	10	162	-	.5	400	-
5	9	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60000
5	11	61	13.3	8.4	7.9	1.2	-	3.5	5.5	.3	20	170	220	-	300	156	.5	457	-
5	16	61	17.2	7.8	7.9	1.8	-	-	-	.3	23	166	230	10	280	153	.2	387	4000
5	22	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2100
5	23	61	16.0	7.8	7.9	1.8	-	-	-	.2	25	180	236	10	6800	-	.2	426	-
5	29	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	800
6	5	61	21.0	8.8	7.8	1.2	-	-	-	.3	24	166	204	15	3250	111	.1	445	10000
6	12	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*100
6	13	61	24.4	5.0	7.8	3.4	-	-	-	.2	26	152	220	-	600	-	.3	-	-
6	19	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*100
6	23	61	21.1	6.6	7.8	-	-	-	-	.1	24	174	232	-	300	138	.2	525	-
6	26	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2100
6	27	61	25.6	7.9	7.9	-	-	-	-	.3	24	152	220	-	800	-	.2	-	-
7	3	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7300
7	6	61	25.0	-	8.1	-	-	-	-	-	23	140	190	-	7500	116	.5	375	-
7	10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18000
7	14	61	23.2	7.2	7.9	2.0	-	-	-	.2	24	160	226	-	310	155	.2	473	-
7	17	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12000
7	24	61	24.4	5.9	7.9	1.6	-	-	-	.2	24	140	196	10	400	-	.1	-	1800
8	1	61	25.0	5.8	7.9	2.0	-	3.0	-	.2	24	172	210	-	575	-	.3	-	-
8	7	61	25.6	6.0	7.9	1.5	-	-	-	.1	23	182	220	-	300	-	.1	-	25000
8	14	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11000
8	15	61	26.7	6.5	7.8	1.5	-	3.0	5.0	.2	25	136	216	10	370	-	.1	-	-
8	22	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16000
8	23	61	25.0	6.5	7.9	2.0	-	-	-	.2	26	144	200	-	400	-	.2	-	-
8	28	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5000

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MISSOURI

MAJOR BASIN MISSOURI RIVER

MINOR BASIN LOWER MISSOURI BELOW NIOBRARA RIVER

STATION LOCATION MISSOURI RIVER AT

ST. JOSEPH, MISSOURI 30

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
9	4	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100000
9	5	61	21.1	6.4	7.9	1.8	-	3.0	5.0	.1	25	127	220	-	800	-	.3	-	100000
9	11	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20000
9	18	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29000
9	19	61	15.5	7.6	8.1	-	-	-	-	.2	23	166	216	-	300	132	.2	456	-
9	26	61	14.4	8.0	8.0	1.9	-	-	-	.2	25	170	234	-	370	120	.2	400	31000

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at St. Joseph, Missouri
Operated by U.S. Geological Survey

STATE Missouri

MAJOR BASIN Missouri River

MINOR BASIN Lower Missouri below Niobrara River

STATION LOCATION Missouri River at St. Joseph, Missouri

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	35.200	37.900	17.500	14.800	10.000	29.900	40.900	35.700	41.200	34.200	35.400	32.700
2	34.200	37.000	16.800	14.500	11.200	29.100	36.600	35.700	43.400	38.600	40.900	32.400
3	33.300	36.000	14.800	15.300	12.500	31.300	33.600	36.000	46.000	39.600	42.300	51.600
4	33.300	35.100	14.600	16.800	13.500	33.600	33.000	36.000	43.400	33.300	37.300	44.800
5	33.300	34.500	15.800	16.600	14.300	34.200	33.600	40.900	37.600	33.300	35.100	37.000
6	32.700	34.200	17.100	15.800	14.500	36.300	33.900	48.400	35.400	52.800	31.600	35.400
7	32.400	33.900	17.100	15.000	14.000	32.400	36.000	44.000	39.600	45.600	32.400	34.200
8	32.700	34.200	17.300	15.200	13.700	30.700	37.300	42.600	42.600	38.600	33.300	33.900
9	33.000	34.500	18.300	16.000	13.700	28.800	38.900	41.600	42.300	36.000	32.400	34.200
10	32.700	34.800	17.700	17.000	14.300	27.600	42.300	38.900	36.600	35.700	32.100	33.300
11	33.000	34.800	16.200	17.100	15.000	25.900	43.700	37.300	34.200	34.500	38.600	33.000
12	32.700	33.900	16.400	17.000	16.000	28.800	67.000	36.000	33.900	33.600	41.600	38.200
13	32.700	33.300	16.200	16.600	18.000	50.800	61.300	35.700	33.300	35.100	39.200	99.200
14	33.300	33.600	15.800	17.000	17.300	61.300	51.200	35.700	42.300	37.300	33.000	73.000
15	34.800	33.900	16.000	17.300	18.100	43.000	47.200	35.700	55.400	36.600	30.700	53.600
16	34.200	34.200	16.600	17.300	19.100	43.700	45.200	34.800	63.100	35.400	31.800	42.600
17	33.900	33.900	16.400	17.500	19.800	42.000	43.000	36.300	53.200	33.600	32.700	36.300
18	33.600	33.600	16.400	17.500	26.300	43.000	40.900	38.600	42.600	33.600	32.700	33.000
19	33.600	31.800	16.000	17.500	25.400	42.600	38.600	38.900	37.600	34.500	33.000	32.700
20	33.600	29.600	15.700	17.300	20.200	42.000	37.000	38.600	38.600	35.700	35.400	33.300
21	34.200	27.600	17.700	16.800	17.500	40.200	36.600	37.600	40.600	40.200	37.900	34.200
22	34.500	25.400	17.300	16.000	19.000	38.900	37.900	37.300	37.600	38.600	41.200	35.400
23	34.200	23.200	12.400	14.000	27.100	37.900	38.200	37.300	37.600	37.300	40.200	39.200
24	34.200	21.100	11.400	12.000	34.800	37.600	38.200	37.000	37.000	42.300	36.300	43.400
25	34.800	19.600	10.400	10.000	28.800	39.200	37.900	37.300	36.000	37.300	36.000	39.600
26	34.800	18.800	9.900	9.000	27.600	42.600	37.300	40.600	35.100	39.200	33.600	37.000
27	34.800	18.100	10.700	8.500	30.200	52.800	36.600	38.900	36.600	36.000	31.600	35.100
28	34.500	18.100	21.700	8.000	36.600	59.000	36.300	37.900	43.000	35.700	31.600	34.200
29	35.100	17.700	18.700	7.500		53.600	35.400	37.300	43.700	40.900	31.800	33.900
30	43.400	17.700	15.500	6.000		48.400	35.700	36.600	36.600	42.000	31.800	48.400
31	39.900		15.300	8.000		44.400		37.600		35.100	32.700	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE NEBRASKA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN LOWER MISSOURI RIVER

STATION LOCATION MISSOURI RIVER AT

OMAHA, NEBRASKA 31

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA			DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	24	60*	11	2	2	7	9	0	37	37							
11	28	60*	12	15	3	4	7	8	16	24							
12	26	60*	1	12	1	12	13	0	11	11							
1	30	61*	2	9	0	6	6	0	0	0							
2	27	61*	3	10	2	2	4	28	21	49							
3	27	61*	4	11	61	2	63	122	3	125							
4	24	61*	5	8	6	5	11	17	3	20							
5	29	61*	6	9	1	5	6	0	0	0							
6	26	61*	7	12	3	4	7	5	12	17							
7	31	61*	8	28	6	4	10	10	13	23							
8	28	61*	9	19	3	5	8	22	26	48							
9	4	61	9	28	-	-	-	0	0	0							
9	11	61	10	11	-	-	-	52	13	65							
9	18	61	10	24	-	-	-	29	21	50							
9	25	61	10	4	4	6	10	33	78	111							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE NEBRASKA
MAJOR BASIN MISSOURI RIVER
MINOR BASIN LOWER MISSOURI RIVER
STATION LOCATION MISSOURI RIVER AT OMAHA, NEBRASKA

DATE OF SAMPLE MONTH	DAY	YEAR	ALGAE (Number per ml.) TOTAL	BLUE-GREEN COCCOID	BLUE-GREEN FILA-MENT-OUS	GREEN COCCOID	GREEN FILA-MENT-OUS	FLAGELLATES (Pigmented) GREEN	FLAGELLATES (Pigmented) OTHER	DIATOMS CENTRIC	DIATOMS PENNATE	INERT DIATOM SHELLS (No. per ml.) CENTRIC	INERT DIATOM SHELLS PENNATE	DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*) FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE	OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	DOMINANT GENERA (See Introduction for Identification)
10	3	60	1000	20		180		220		350	240	330	40										420	10					--93-
10	17	60	900		20	90		70	130	290	240	150	130	82	30	26	10	56	10	83	10	60	70	10					--9--
11	8	60	2300	20	40	70				1920	250	850	70	80	50	82	10	36	*	32	*	30	110	10		1			--9--
11	21	60	800							770		70	90	80	30	82	20	84	10	71	10	40				1	1		--9--
12	5	60	1900					130		1540	270	160	200	82	40	84	20	71	10	70	10	20				1			--9--
12	19	60	1200			50		50		1050	90	50	50	82	90	84	*												--9--
1	2	61	1500	20		110		290	90	960	70	130		82	80	80	10	26	*			10	20						-19--
1	16	61	300					20		220	50	50	20	82	40	84	20	80	10			30			2				--9--
2	6	61	700							630	20	70	20																--9--
3	8	61	1700			20		50		1300	360	2550	420	82	40	26	30	70	10	58	*	20	70						4-967
3	20	61	400					50	20	130	220	20	290																-----
4	3	61	22900	20		90		600		21800	380	580	180	82	90	26	*	56	*										--933
4	17	61	3600			290		440		2260	620	210	100	82	70	86	10	26	*	9	*	20							3192-
5	1	61	2900			40		380	20	1250	1180	740	420	47	20	71	10	9	10	80	10	60	90						3-96-
5	15	61	4600			120		620		2550	1330	520	270	9	30	82	30	80	10	92	10	30				1	2		3-963
6	5	61	10300		20	930		500	40	6210	2610	1220	520	84	30	9	30	80	20	26	*	10							38913
6	19	61	5700		40	290		170	20	3750	1430	210	120	47	60	83	10	9	10	45	10	20			4	8			3-973
7	3	61	2800			360		600		1300	510	1520	360	84	40	26	20	80	10	56	10	20		10		3	3		41963
7	17	61	6400		170	1020		850	40	3420	950	680	250	47	60	45	20	83	10	58	10	10							71927
8	7	61	4600	20		1430		930	20	1700	500	330	100	47	70	58	10	45	10	31	*	10			2	2	1		48937
8	21	61	2000			370		270		1010	370	230	80	80	20	83	20	47	20	58	20	20							-89--
9	4	61	2800		20	790		710		930	370	100	120	47	30	80	20	58	20	32	10	30			2		3		-8937
9	18	61	1500			270		250		600	410	60	120												1				4-9--

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE NEBRASKA
MAJOR BASIN MISSOURI RIVER
MINOR BASIN LOWER MISSOURI RIVER
STATION LOCATION MISSOURI RIVER AT
OMAHA, NEBRASKA 31

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	24	60	11	3	1751	406	61	345	2	13	23	3	2	17	1	8	4	2	9
11	21	60	12	4	3606	205	32	173	0	5	14	1	1	11	1	6	1	1	5
12	20	60	1	1	4537	185	24	161	0	5	10	1	1	8	0	3	1	0	5
1	19	61	1	30	6864	119	20	99	0	5	6	0	0	6	0	2	1	1	5
2	13	61	2	27	4367	285	107	178	2	30	29	0	1	26	2	13	11	2	20
3	13	61	3	23	719	*	-	-	-	-	-	-	-	-	-	-	-	-	-
4	10	61	4	24	924	765	268	497	11	78	62	3	4	50	5	24	21	5	67
5	8	61	5	22	1438	507	118	389	1	31	37	4	3	29	1	14	7	3	25
6	5	61	6	19	1327	484	94	390	1	25	33	3	2	28	0	11	6	3	15
7	3	61	7	17	1996	364	146	218	6	45	47	15	7	23	2	15	12	3	18
7	31	61	8	14	2422	255	85	170	2	23	20	4	2	13	1	8	7	2	23
8	2	61	8	14	3716	132	46	86	1	12	16	3	1	12	0	5	3	1	8
8	28	61	9	11	4202	138	41	97	2	11	12	2	1	9	0	4	3	1	8
9	25	61	10	9	4205	137	29	108	0	8	10	2	1	7	0	3	2	1	5

*SAMPLE NOT PROCESSED-FLOW TOO LOW

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NEBRASKA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN LOWER MISSOURI RIVER

STATION LOCATION MISSOURI RIVER AT OMAHA, NEBRASKA

31

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	16.1	8.2	8.2	1.1	24	2.2	4.5	.0	11	152	230	24	160	182	–	526	18000
10	10	60	15.9	8.0	8.3	.8	49	1.4	6.3	.0	10	149	228	24	140	176	–	453	–
10	17	60	14.5	8.0	8.3	.7	21	1.6	5.0	.0	10	155	226	24	140	178	–	465	1700
10	24	60	11.6	8.5	8.3	.9	21	1.5	4.9	.0	10	157	236	24	150	177	–	471	7700
10	31	60	9.4	9.1	8.3	1.2	26	1.5	5.2	.0	10	161	234	40	190	182	–	454	4500
11	7	60	6.7	9.0	8.3	.6	26	1.6	6.0	.0	10	164	236	24	200	181	–	443	13000
11	14	60	6.5	11.0	8.4	2.0	24	1.6	5.4	.0	10	168	240	32	170	184	.1	492	3800
11	21	60	4.7	11.0	8.1	.7	24	1.8	4.2	.0	11	180	254	8	150	192	.0	454	2700
11	28	60	5.6	10.2	8.2	1.1	23	2.7	6.9	.0	13	192	270	8	95	190	.0	494	10000
12	5	60	2.7	11.7	8.3	1.8	28	2.8	8.5	.1	11	212	282	10	190	188	.1	525	3800
12	12	60	.2	12.8	8.2	1.9	20	2.8	5.8	.1	12	208	284	6	90	195	.1	501	8000
12	19	60	.3	12.4	8.4	1.3	18	2.8	6.4	.1	13	205	290	8	90	198	.1	529	670
12	26	60	.1	12.9	8.2	1.1	21	3.1	6.5	.1	13	216	304	7	10	205	.0	562	–
1	2	61	.1	12.1	8.2	1.1	21	3.0	6.3	.2	12	186	270	8	15	190	.1	514	970
1	9	61	.2	11.1	9.6	1.1	15	3.0	6.2	.1	13	186	266	7	15	187	.3	545	140
1	16	61	.2	11.2	8.1	1.2	16	3.0	6.5	.1	12	187	270	9	10	196	.1	519	1500
1	23	61	.1	11.4	8.1	1.3	20	3.1	6.3	.2	13	207	292	7	11	202	.1	543	440
1	30	61	.1	12.2	8.1	.9	23	3.9	7.3	.2	13	197	284	7	6	213	.1	535	140
2	6	61	.1	10.9	8.1	.9	12	3.6	6.4	.1	11	173	256	8	8	178	.1	474	77
2	13	61	.4	11.0	8.1	.8	26	2.1	6.2	.2	12	179	250	9	8	168	.2	464	100
2	20	61	.2	9.9	7.9	2.8	29	2.8	11.1	.4	13	178	258	20	10	174	.3	458	4500
2	27	61	.3	8.6	8.0	7.4	64	4.0	17.1	.5	12	160	214	34	450	145	.3	418	4800
3	6	61	.4	8.4	7.8	10.6	77	5.0	28.5	.6	12	125	164	36	850	71	.2	290	5600
3	13	61	1.5	9.3	8.1	6.4	69	3.8	19.3	.4	80	140	186	26	1200	95	.2	324	5100
3	20	61	3.6	9.0	7.9	5.6	78	14.0	22.7	.7	7	122	168	30	1200	78	.4	296	14000
3	27	61	7.8	8.5	8.1	2.2	50	5.9	15.1	.3	7	132	185	16	760	104	.1	328	2500
4	3	61	4.7	10.0	8.2	3.0	34	5.7	11.1	.1	7	161	228	12	310	105	.1	364	23000
4	10	61	5.6	9.5	8.3	2.3	37	3.1	13.0	.1	6	187	252	9	230	117	.1	441	11000
4	17	61	4.2	10.8	8.4	2.2	27	2.7	10.5	.0	11	104	266	6	210	175	.0	459	2300
4	24	61	12.2	8.9	8.3	2.2	22	2.8	10.5	.0	12	182	260	7	200	186	.0	490	12000
5	1	61	11.8	8.7	8.3	1.0	30	2.9	10.0	.0	12	176	258	7	230	187	.0	492	19000
5	8	61	11.6	8.1	8.4	.5	24	2.7	9.5	.0	11	177	252	8	200	190	.0	484	9500
5	15	61	15.9	7.5	8.4	1.7	24	2.2	7.0	.0	13	177	256	7	180	188	.0	497	18000
5	22	61	15.6	8.4	8.4	1.4	33	2.2	7.0	.0	11	180	260	8	150	181	.1	499	12500
5	29	61	18.7	7.5	8.5	1.6	26	2.5	8.4	.0	13	177	259	9	150	185	.1	500	9500
6	5	61	21.1	7.0	8.5	1.5	36	2.6	6.8	.0	11	171	238	9	260	177	.0	473	26000
6	12	61	24.0	6.7	8.4	1.4	24	2.4	6.7	.0	12	166	236	9	150	175	.1	469	4300
6	19	61	21.7	6.8	8.1	1.3	31	2.4	6.1	.0	11	165	240	10	280	166	.0	461	5000
6	26	61	21.8	7.5	8.5	1.5	21	2.7	6.9	.0	11	168	238	10	160	169	.0	457	3700

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NEBRASKA
MAJOR BASIN MISSOURI RIVER
MINOR BASIN LOWER MISSOURI RIVER
STATION LOCATION MISSOURI RIVER AT
OMAHA, NEBRASKA 31.

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	3	61	25.1	6.1	8.3	1.0	33	2.8	7.1	.0	10	165	233	12	150	169	.0	449	3300
7	10	61	24.6	6.5	8.3	.9	28	2.5	6.8	.0	12	162	226	10	170	182	.1	459	6000
7	17	61	24.3	6.7	8.3	.9	25	2.6	6.8	.0	12	157	224	12	150	178	.0	445	2500
7	24	61	23.2	6.4	8.3	.6	20	2.6	6.8	.0	11	155	218	12	140	176	.0	441	2000
7	31	61	26.6	6.2	8.1	.7	21	2.5	7.0	.0	11	154	220	12	200	173	.1	445	3700
8	7	61	26.1	6.6	8.3	.9	180	2.4	6.7	.0	12	155	223	10	140	179	.0	469	2800
8	14	61	24.1	6.7	8.2	.8	20	1.0	5.1	.0	10	155	221	8	160	178	.0	464	7100
8	21	61	22.5	7.3	8.3	.9	18	2.5	6.8	.0	8	154	225	7	150	186	–	440	2000
8	28	61	24.5	7.0	8.2	1.0	18	2.8	7.1	.0	9	154	227	6	150	186	–	471	7300
9	4	61	20.7	7.4	8.3	.8	16	3.0	6.7	.0	12	155	228	8	130	191	–	439	2900
9	11	61	23.3	6.9	8.2	1.7	12	3.1	–	.2	11	158	230	8	220	193	–	436	10000
9	18	61	16.6	8.1	8.2	.2	25	2.9	7.0	.0	11	160	240	11	180	205	–	471	4800
9	25	61	14.1	9.1	8.3	1.1	19	2.9	6.7	.0	11	160	236	6	150	192	–	468	9800

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Omaha, Nebraska
Operated by U.S. Geological Survey

STATE Nebraska

MAJOR BASIN Missouri River

MINOR BASIN Lower Missouri River

STATION LOCATION Missouri River at Omaha, Nebraska

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	27.700	29.000	10.300	11.600	10.600	19.700	23.900	26.600	29.200	27.000	33.200	31.500
2	27.700	28.000	10.200	11.000	10.300	21.700	22.800	26.800	27.700	27.500	31.500	32.100
3	27.200	28.000	10.200	10.500	10.000	21.900	23.000	27.200	24.300	27.700	31.200	31.800
4	27.500	28.400	10.700	10.000	9.780	25.400	23.000	27.500	23.000	27.700	29.200	31.000
5	28.200	28.700	10.900	9.400	9.910	23.000	24.300	28.200	23.400	27.700	30.200	30.000
6	28.700	29.200	10.700	9.600	9.520	21.300	25.700	28.000	25.200	28.200	30.000	29.700
7	28.400	29.200	10.700	10.500	9.130	19.500	25.900	28.200	26.600	28.400	27.000	29.200
8	28.200	29.200	10.300	11.000	8.880	18.700	25.700	27.500	25.900	28.700	28.000	29.000
9	28.000	29.000	9.260	11.200	8.760	17.600	26.400	26.600	25.000	28.700	28.700	29.200
10	27.700	28.400	9.780	11.000	9.000	16.900	26.600	26.100	25.000	28.400	32.100	29.400
11	27.500	27.700	10.200	10.700	9.130	16.700	26.800	25.400	25.200	28.400	34.600	31.200
12	27.500	27.200	11.000	10.600	9.260	17.600	27.200	25.700	25.900	29.400	30.000	31.000
13	27.700	27.700	11.400	11.000	9.390	18.900	27.500	26.400	27.700	30.000	26.800	31.500
14	28.400	28.000	11.300	11.000	9.650	17.800	27.000	26.600	31.800	29.400	27.200	31.200
15	29.000	28.400	11.300	10.900	9.650	25.900	26.800	27.200	40.400	28.200	28.400	29.000
16	28.400	28.700	11.600	10.900	10.600	28.700	26.400	27.700	33.700	28.200	28.400	27.500
17	28.000	27.000	11.400	10.600	11.600	28.700	25.400	27.500	25.000	29.200	28.700	27.700
18	27.500	24.100	10.700	10.300	10.400	28.400	24.600	27.000	23.000	29.700	29.000	28.200
19	27.500	20.700	10.400	10.700	9.130	26.800	24.600	27.000	23.900	29.700	30.700	29.000
20	27.500	18.100	10.200	10.500	9.130	24.100	25.000	26.100	25.000	29.700	29.000	29.000
21	27.000	16.200	8.000	10.200	9.650	21.300	26.400	25.000	26.100	30.400	29.000	29.200
22	27.200	14.000	8.500	10.000	10.700	18.900	26.800	25.400	26.800	30.200	29.700	29.700
23	27.200	12.400	8.000	9.500	14.100	20.700	26.600	25.900	26.400	29.400	30.400	29.200
24	27.500	11.800	8.000	9.000	15.800	24.300	26.400	25.700	26.100	29.700	30.000	28.700
25	28.000	11.600	8.000	8.500	16.200	27.500	26.100	24.600	26.100	29.700	28.700	28.700
26	28.000	11.300	8.500	9.000	17.200	29.400	25.900	23.900	26.400	30.000	29.000	28.200
27	27.700	11.000	13.500	9.500	18.000	30.000	25.400	24.100	29.000	30.000	29.700	28.400
28	28.200	11.100	10.300	8.500	16.200	30.400	25.700	24.300	28.200	34.600	30.000	28.200
29	29.000	11.300	10.600	8.000		30.000	26.100	25.400	27.700	30.400	30.400	28.700
30	29.700	11.300	10.700	7.500		29.200	26.100	26.800	27.000	29.700	31.000	30.400
31	30.000		11.400	9.000		27.200		29.700		30.200	31.000	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE SOUTH DAKOTA
MAJOR BASIN MISSOURI RIVER
MINOR BASIN LOWER MISSOURI RIVER
STATION LOCATION MISSOURI RIVER AT
YANKTON, SOUTH DAKOTA 32

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA			DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	24	60*	11	2	0	0	0	0	0	0							
11	28	60*	12	8	0	7	7	0	0	0							
12	27	60*	1	10	0	13	13	0	1	1							
1	30	61*	2	8	0	5	5	0	0	0							
2	27	61*	3	10	0	3	3	0	1	1							
3	27	61*	4	12	0	4	4	0	1	1							
4	24	61*	5	8	1	3	4	0	0	0							
5	29	61*	6	12	1	4	5	0	0	0							
6	26	61*	7	21	0	4	4	0	8	8							
7	31	61*	8	24	1	4	5	1	0	1							
8	21	61*	9	14	1	3	4	0	12	12							
9	11	61	10	24	-	-	-	14	18	32							
9	18	61	10	13	-	-	-	0	16	16							
9	25	61	10	5	0	2	2	3	30	33							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE SOUTH DAKOTA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN LOWER MISSOURI RIVER

STATION LOCATION MISSOURI RIVER AT YANKTON, SOUTH DAKOTA 32

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFIERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	3	60	2800			50		490		1050	1270	1180	270	82	40	83	10	36	10	68	*	40	290	10	1	1			--933
10	17	60	300			50		20	90	70	50	200		82	50	16	10	65	10	26	*	40	70	10	6				-----
11	7	60	900							780	130	540	400	80	50	2	10	36	*	83	*	30	400	10	32	12			--9--
11	22	60	6500			50			50	6100	310	510	650	80	80	36	10	83	10	82	*	10		10	3	1	1		--94-
12	5	60	500		20			20	90	350	70		50																--9--
12	19	60											50																-----
1	3	61	200							140	20	20		84	80	80	10	82	10			10							-----
1	16	61	100							20	50	20		84	70	80	20	9	*		*	10			2			1	-----
2	6	61	100					20		50															3				-----
2	20	61	500					200	50	70	200	20	20	36	60	82	20	62	*	45	*	20			58	48			-1-4-
3	6	61	800					470		130	200	20	20	36	50	62	10	35	*	71	*	40			10	40			-1---
3	20	61	2000					690		1100	250	50	50	36	50	82	20	35	10	45	10	10	50		9	8			--913
4	3	61	16100			310	20	220	20	15070	440	820	70	82	70	84	10	36	*	9	*	20	40		8	6			--92-
4	17	61	3800			490		130		2550	630	850	360	82	20	9	20	71	10	36	10	40	20			3			3-92-
5	1	61	4800			80		270	20	2690	1780	950	330	84	60	9	20	80	10	45	10	20		20	6	32			3-96-
5	15	61	3900					750	20	1220	1900	540	390	84	30	9	30	35	10	71	10	30		20	10	31			3196-
6	5	61	28100	20	60	460		1720		21050	4760	3540	1410	80	50	84	20	9	10	82	*	10					2		31963
6	19	61	4200			160		650	40	1210	2170	1070	860	84	30	80	20	9	20	45	10	20			474	111	4		31943
7	3	61	7500		180	90		2970	20	3130	1140	1990	1970	84	40	80	30	56	10	9	10	20			14	3			31967
7	17	61	8600			230		1800	40	4390	2130	620	1040	80	40	83	10	36	10	45	10	40							-1943
8	7	61	5300		40	870		1620	60	1700	1040	560	310	47	40	58	20	80	20	83	*	20							-1927
8	21	61	12100			250		9990	20	670	470	1030	890										20						-19-7
9	5	61	7700			500		4200	20	1620	1390	520	190	47	30	58	20	83	20	80	10	30	20						-1943
9	18	61	1200		20	70		800		110	160	180	160	80	20	58	20	47	20	83	10	40	50						-1---

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE SOUTH DAKOTA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN LOWER MISSOURI RIVER

STATION LOCATION MISSOURI RIVER AT YANKTON, SOUTH DAKOTA 32

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	24	60	11	7	3310	156	30	126	1	8	10	1	1	8	0	3	2	1	5
11	22	60	12	5	1890	238	26	212	1	7	10	1	1	8	0	2	1	1	4
12	20	60	1	3	4400	156	34	122	2	9	9	1	1	7	0	3	2	1	8
1	30	61	2	13	4370	159	40	119	2	12	8	1	1	6	0	4	3	0	11
2	28	61	3	13	3290	156	39	117	1	11	11	1	1	8	1	4	3	1	8
3	28	61	4	10	4490	167	28	139	0	8	10	1	1	7	1	3	1	1	5
4	26	61	5	8	4860	129	48	81	-	-	-	-	-	-	-	-	-	-	-
5	22	61	6	5	3520	151	42	109	-	-	-	-	-	-	-	-	-	-	-
6	19	61	7	3	5000	123	25	98	-	-	-	-	-	-	-	-	-	-	-
6	19	61		*	13380	133	38	95	2	11	11	2	1	8	0	4	3	1	6
7	31	61	8	14	4690	138	52	86	-	-	-	-	-	-	-	-	-	-	-
8	28	61	9	11	4920	122	24	98	-	-	-	-	-	-	-	-	-	-	-
9	25	61	10	9	3910	130	27	103	-	-	-	-	-	-	-	-	-	-	-
9	25	61		*	13520	130	35	95	2	10	10	2	1	7	0	3	2	1	7

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE SOUTH DAKOTA
MAJOR BASIN MISSOURI RIVER
MINOR BASIN LOWER MISSOURI RIVER
STATION LOCATION MISSOURI RIVER AT
YANKTON, SOUTH DAKOTA 32

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	16.8	10.6	8.4	.9	-	2.8	4.8	.1	11	148	200	30	20	-	-	-	37
10	10	60	17.4	10.5	8.3	1.8	-	2.8	6.6	.1	12	156	220	20	10	-	-	-	-
10	17	60	16.5	10.9	8.3	2.9	-	2.3	5.8	.1	12	158	200	15	10	-	-	-	-
10	24	60	12.0	11.9	8.3	1.9	-	2.3	4.8	.1	12	158	220	30	10	-	-	-	32
10	31	60	10.9	10.3	8.4	1.8	-	1.8	4.2	.1	12	168	220	20	25	-	-	-	-
11	7	60	8.3	11.6	8.2	.8	-	2.2	3.9	.1	12	170	216	20	10	-	-	-	14
11	15	60	6.2	13.2	8.4	.7	-	2.2	4.2	.1	12	164	236	30	15	-	-	-	*10
11	21	60	6.0	12.8	8.3	.5	-	2.8	3.8	.1	12	172	232	20	10	-	-	-	19
11	28	60	9.0	13.9	8.5	.2	-	2.1	3.1	.1	15	168	258	40	50	-	-	-	9
12	5	60	2.5	15.5	8.2	.8	-	3.9	4.2	.1	13	172	264	30	30	-	-	-	20
12	12	60	.1	13.1	8.3	.7	-	1.9	3.0	.1	14	170	244	30	30	-	-	-	4
12	19	60	1.0	13.5	8.4	.4	-	.9	2.4	.1	12	172	224	30	30	-	-	-	1800
12	27	60	.8	13.3	8.1	.4	-	.9	2.6	.1	16	174	244	10	10	-	-	-	-
1	3	61	4.0	13.3	8.1	.7	-	1.2	3.8	.1	13	178	232	20	35	-	-	-	-
1	9	61	.8	13.2	8.1	.9	-	3.9	5.7	.2	12	180	236	10	10	-	-	-	20
1	16	61	.9	13.6	8.2	.8	-	1.4	5.3	.1	13	176	232	20	10	-	-	-	*17
1	23	61	2.0	14.5	8.2	.8	-	.6	1.6	.1	13	176	224	5	0	-	-	-	13
1	30	61	3.0	13.8	8.1	.7	-	2.2	3.4	.2	18	166	228	20	20	-	-	-	2
2	6	61	3.0	12.7	7.9	.9	-	1.1	3.0	.2	13	168	224	20	10	-	-	-	12
2	13	61	.5	15.5	8.2	1.0	-	.8	2.1	.1	12	178	266	15	10	-	-	-	6
2	20	61	1.0	14.5	8.2	.9	-	.5	3.2	.2	25	176	232	10	10	-	-	-	3
2	27	61	1.9	13.4	8.2	.3	-	.2	2.9	.2	25	168	210	20	10	-	-	-	*1
3	6	61	3.0	12.7	8.1	1.1	-	1.1	4.4	.2	19	154	200	40	10	-	-	-	38
3	13	61	4.8	13.2	8.1	1.8	-	.8	4.0	.2	20	154	200	30	30	-	-	-	-
3	20	61	3.1	15.4	8.1	2.3	-	1.2	3.8	.2	16	154	212	20	10	-	-	-	14
3	27	61	4.0	15.4	8.2	1.6	-	.4	2.2	.2	20	160	182	30	10	-	.1	-	6
4	3	61	7.0	15.7	8.3	.2	-	.4	4.8	.2	18	148	204	20	10	-	.1	-	-
4	10	61	6.2	16.2	8.3	.7	-	.7	2.9	.2	20	170	216	30	25	-	.1	-	2
4	17	61	4.5	16.8	8.3	.6	-	1.8	2.4	.2	18	174	256	40	60	-	.1	-	-
4	24	61	8.9	12.9	8.2	1.1	-	1.0	3.3	.2	19	168	232	40	30	-	.1	-	7
5	1	61	9.3	12.5	8.4	1.8	-	.4	2.8	.2	23	170	232	40	35	-	.1	-	13
5	8	61	10.4	13.5	8.2	4.9	-	.5	3.3	.2	20	158	264	40	20	-	.1	-	-
5	15	61	13.8	12.6	8.3	4.5	-	.9	3.4	.1	20	176	236	30	50	-	.1	-	-
5	22	61	13.8	14.1	8.2	1.8	-	.9	3.6	.2	20	166	234	40	20	-	.1	-	-
5	29	61	16.0	15.3	8.3	3.7	-	.9	3.5	.1	22	164	240	40	30	-	.1	-	-
6	12	61	20.9	9.0	8.1	2.8	-	1.3	3.8	.2	25	160	230	20	20	-	.0	-	51
6	19	61	21.8	9.0	8.2	.8	-	.7	3.9	.1	17	152	228	30	20	-	.1	-	150
6	26	61	20.4	9.5	8.2	8.4	-	1.5	6.0	.2	15	150	220	30	20	-	.1	-	70
7	3	61	24.0	9.0	8.2	1.2	-	2.0	5.8	.2	18	156	226	20	20	-	.1	-	49

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE SOUTH DAKOTA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN LOWER MISSOURI RIVER

STATION LOCATION MISSOURI RIVER AT YANKTON, SOUTH DAKOTA 32

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	10	61	22.0	8.5	8.1	.9	-	1.8	5.8	.2	18	144	224	40	30	-	.1	-	-
7	17	61	22.8	9.2	8.1	1.2	-	1.0	5.2	.2	19	162	232	20	20	-	.1	-	40
7	24	61	23.2	8.9	8.2	1.0	-	.8	5.1	.2	19	160	214	20	20	-	.1	-	32
7	31	61	24.9	8.3	8.1	2.1	-	1.5	4.6	.2	20	158	222	40	50	-	.1	-	-
8	7	61	25.0	9.0	8.2	3.6	-	1.8	4.8	.1	22	156	224	20	20	-	.1	-	-
8	14	61	24.8	8.5	8.1	.8	-	1.4	4.1	.1	20	150	220	30	20	-	.1	-	120
8	21	61	23.5	9.0	8.1	2.3	-	1.2	4.1	.1	18	152	232	30	20	-	.1	-	30
8	28	61	24.2	9.8	8.2	1.0	-	1.4	3.9	.2	19	152	248	40	20	-	.1	-	960
9	4	61	21.4	9.8	8.2	1.2	-	1.6	4.2	.2	16	152	224	30	30	-	.1	-	-
9	5	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
9	11	61	21.0	10.3	8.3	1.0	-	.5	3.0	.2	20	156	234	20	20	-	.1	-	280
9	18	61	20.8	10.1	8.2	.9	-	.6	2.8	.2	18	154	232	20	30	-	.1	-	4
9	25	61	16.0	11.7	8.2	1.0	-	.9	2.6	.1	16	158	238	20	20	-	.1	-	24

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Yankton, South Dakota
Operated by U.S. Geological Survey

STATE South Dakota

MAJOR BASIN Missouri River

MINOR BASIN Lower Missouri River

STATION LOCATION Missouri River at Yankton, South Dakota

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	28.100	27.800	8.420	8.800	10.000	6.740	15.000	25.400	19.500	29.800	26.400	29.000
2	27.700	28.000	8.100	8.730	8.500	6.520	17.700	24.900	20.300	28.900	28.900	28.900
3	27.800	27.600	8.380	8.730	8.000	6.600	19.900	23.000	21.000	28.600	27.700	29.500
4	27.600	27.100	8.660	8.730	8.960	6.460	22.000	23.000	21.800	28.000	25.100	29.500
5	27.400	27.400	8.760	8.660	8.660	7.220	21.200	22.000	19.600	28.500	26.000	28.900
6	27.400	27.600	8.420	8.560	8.620	8.730	22.500	21.800	21.000	29.200	27.200	28.700
7	27.300	28.100	8.730	8.620	8.520	9.360	23.000	22.300	21.500	28.300	27.600	29.800
8	27.800	27.600	9.160	8.700	8.310	8.760	21.700	22.700	21.000	28.400	28.700	30.000
9	28.100	26.300	9.920	8.800	7.360	7.580	20.500	22.200	22.200	28.400	26.100	29.700
10	28.800	27.100	9.640	8.730	6.180	6.880	20.600	23.000	23.100	29.200	23.000	29.400
11	28.300	27.100	9.400	8.920	6.320	6.980	22.700	21.800	23.800	29.100	25.800	28.600
12	27.400	27.000	9.760	9.040	7.020	7.080	23.000	21.300	24.900	27.500	27.700	28.100
13	27.600	27.000	8.920	8.960	7.470	7.080	23.400	23.200	21.800	28.400	28.700	28.600
14	27.900	26.600	8.450	9.000	7.260	7.160	22.800	25.000	16.200	30.200	29.600	28.900
15	27.400	23.900	8.660	8.880	7.440	7.190	21.700	22.300	15.800	30.200	29.200	27.700
16	27.100	21.400	9.640	9.120	7.440	6.880	22.200	20.900	19.100	30.200	28.600	28.300
17	26.900	18.500	9.640	9.280	7.050	6.740	22.900	19.500	21.500	30.700	27.900	28.200
18	26.500	15.800	9.680	9.520	7.750	7.330	23.800	19.500	24.500	30.200	27.700	27.600
19	26.700	13.000	10.700	9.500	8.100	7.800	24.000	21.400	27.300	28.600	27.100	28.200
20	26.900	10.400	10.600	9.500	8.140	11.400	24.900	23.100	23.800	28.900	27.500	27.400
21	27.400	9.640	10.700	9.500	9.160	13.800	25.800	25.800	20.300	29.200	27.000	27.300
22	27.300	9.080	10.200	9.500	10.600	15.200	25.000	25.200	23.000	29.600	25.100	27.700
23	26.900	8.800	9.480	9.500	9.600	17.100	23.900	20.200	28.200	29.300	26.200	24.900
24	27.100	8.700	9.120	9.500	8.960	15.600	22.700	17.800	28.100	28.800	27.000	23.800
25	27.600	8.620	8.700	9.500	9.080	14.200	24.400	20.600	28.000	28.500	27.400	22.000
26	28.600	8.960	9.040	10.000	8.960	14.300	27.800	23.800	27.800	27.500	28.500	24.000
27	28.100	9.080	9.560	10.000	9.120	12.500	27.700	23.100	25.000	26.900	28.600	25.000
28	27.600	9.760	9.800	10.000	8.280	9.160	28.900	22.300	23.200	28.200	29.400	27.900
29	27.600	8.960	9.520	10.000		7.470	27.200	21.800	29.700	28.600	29.800	31.200
30	27.400	8.730	9.120	10.000		10.200	26.200	21.500	29.100	29.300	30.100	30.700
31	27.700		8.960	10.000		13.000		20.600		29.200	29.500	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE NORTH DAKOTA
MAJOR BASIN MISSOURI RIVER
MINOR BASIN MISSOURI-SOURIS RIVERS
STATION LOCATION MISSOURI RIVER AT
BISMARCK, NORTH DAKOTA 33

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
2	28	61*	3	17	0	4	4	2	22	24									
3	21	61*	4	24	0	3	3	0	3	3									
4	25	61*	5	3	0	0	0	0	0	0									
6	1	61*	6	12	0	5	5	0	4	4									
6	28	61*	7	12	0	3	3	0	0	0									
8	1	61*	8	30	1	0	1	0	8	8									
8	29	61*	9	19	0	6	6	0	11	11									
9	5	61	9	29	0	5	5	0	10	10									
9	11	61	10	23	-	-	-	5	13	18									
9	19	61	10	7	-	-	-	4	18	22									
9	26	61	10	20	-	-	-	9	24	33									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE NORTH DAKOTA
MAJOR BASIN MISSOURI RIVER
MINOR BASIN MISSOURI-SOURIS RIVERS
STATION LOCATION MISSOURI RIVER AT BISMARCK, NORTH DAKOTA

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	5	60	100	20		70				70			20	65	10	83	10	82	10	47	10	60	20			1			-----
11	9	60	300			20			20	70	200		90	80	20	9	10	83	10	15	10	50	70			2			-----
11	23	60	400							110	330	20	310	83	20	80	10	9	10	36	10	50	40						-----
12	5	60	300							90	160		70	9	30	84	20	56	10	83	10	40	160			1			-----
2	8	61									20																		-----
3	7	61									20		90										50						-----
3	21	61	100								90	20	70	9	30	35	*	65	*	86	*	60							-----
4	7	61	500			20				270	200		40	9	40	82	20	35	*	36	*	40			1				--9--
4	12	61	400			20		20		20	360		310	9	50	82	10	35	10	51	*	30				1			-----
5	3	61	200					40	40	20	100		60	9	10	45	10	36	10	86	10	60	40		1	2			-----
5	16	61	1200					40		600	580	250	390	9	60	86	10	51	*	36	*	30			14	35			--9-7
5	31	61	400			20		80		80	190		20	9	20	84	10	36	10	45	10	60			56	53			-----
6	20	61	200				20			20	150			36	20	15	20	9	10	80	10	50			10	20			-----
6	28	61	300			70		20		20	180		110	36	70	80	*	92	*	56	*	20			7	42			---4-
7	18	61	500			60		100			330		60	36	50	9	10	92	*	45	*	40							---4-
8	8	61	300							100	210		60	36	20	65	10	9	10	47	*	60			1	9			-----
8	23	61	200			20		20		20	190		60	47	40	36	20	9	10	65	10	30							-----
9	5	61	200			20		40			150		20	9	60	36	10	47	10	65	*	20			3	13			-----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE NORTH DAKOTA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN MISSOURI-SOURIS RIVERS

STATION LOCATION MISSOURI RIVER AT BISMARCK, NORTH DAKOTA 33

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
11	8	60	12	1	2242	187	22	165	1	5	8	1	1	6	0	2	1	1	4
12	17	60	1	9	2242	238	24	214	1	4	11	2	1	8	0	2	1	1	4
1	28	61	2	20	2317	219	34	185	1	9	10	1	1	8	0	4	2	1	7
3	6	61	3	29	2242	339	79	260	4	24	17	2	1	12	2	7	8	2	17
4	20	61	5	14	2167	176	41	135	0	13	13	3	2	8	0	5	3	1	6
6	8	61	6	30	2242	237	57	180	2	18	18	6	2	10	0	6	4	1	8
7	20	61	8	12	2242	248	73	175	3	20	18	4	1	12	1	7	6	1	18
8	30	61	9	22	2243	169	34	135	1	9	12	3	1	8	0	4	2	1	5

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NORTH DAKOTA
MAJOR BASIN MISSOURI RIVER
MINOR BASIN MISSOURI SOURIS RIVERS
STATION LOCATION MISSOURI RIVER AT
BISMARCK, NORTH DAKOTA 33

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	4	60	-	-	8.4	-	-	-	-	.1	-	150	208	15	23	-	-	-	67
10	5	60	14.4	9.3	-	.7	7	-	-	-	10	-	-	-	-	158	.2	395	-
10	11	60	-	-	8.4	-	-	-	-	.3	-	148	210	6	30	-	-	-	71
10	13	60	13.0	9.5	-	-	-	.1	-	-	11	-	-	-	-	155	.2	395	-
10	19	60	7.3	10.7	-	1.3	7	.1	-	-	9	-	-	-	-	153	.2	384	110
10	26	60	10.3	10.5	-	1.2	6	.0	.2	-	7	-	-	-	-	168	.1	392	260
11	2	60	9.9	12.5	8.4	2.3	7	1.0	-	.2	6	156	202	5	30	168	.0	389	*4
11	9	60	2.7	-	8.5	-	5	1.4	-	.1	6	156	212	-	27	225	.1	396	84
11	16	60	-	-	8.5	-	-	-	-	.2	-	154	208	0	62	-	-	-	-
11	23	60	-	-	8.4	-	-	-	-	.2	-	152	208	3	64	-	-	-	-
11	30	60	-	-	8.4	-	-	-	-	.4	-	154	206	5	53	-	-	-	110
12	7	60	-	-	8.2	-	-	-	-	.2	-	154	208	3	46	-	-	-	10
12	14	60	3.1	-	8.4	-	-	-	-	.3	-	152	202	15	65	-	-	-	4
12	18	60	.8	-	8.4	-	-	-	-	.2	-	152	200	0	27	-	-	-	-
12	21	60	-	-	8.4	-	-	-	-	.4	-	152	210	8	37	-	-	-	56
12	22	60	.9	13.4	-	5.5	9	.9	-	-	8	-	-	-	-	167	.1	400	-
1	4	61	.8	13.1	8.4	.8	11	1.1	2.9	.2	8	154	208	3	20	150	.1	400	330
1	9	61	-	-	8.3	-	-	-	-	.1	-	154	208	4	30	-	-	-	-
1	10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	88
1	11	61	.8	12.8	-	.8	9	1.2	-	-	8	-	-	-	-	150	.1	417	-
1	18	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31
1	19	61	.8	12.9	-	.7	13	1.3	2.5	-	8	-	-	-	-	148	.1	406	-
1	24	61	-	-	8.3	-	-	-	-	.2	-	152	206	3	8	-	-	-	2
1	26	61	.8	13.3	-	1.1	15	1.3	3.0	-	7	-	-	-	-	205	.0	417	-
2	1	61	.7	12.8	-	.7	-	1.0	2.4	-	7	-	-	-	-	210	.0	395	22
2	7	61	-	-	8.5	-	-	-	-	.2	-	156	206	15	20	-	-	-	-
2	8	61	-	-	8.3	-	-	-	-	.2	-	156	208	3	18	-	-	-	130
2	15	61	.8	12.5	8.5	.5	8	1.2	2.4	.4	7	154	206	7	10	204	.0	406	-
2	21	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180
2	28	61	-	-	8.4	-	-	-	-	.2	-	156	210	25	20	-	-	-	84
3	1	61	.9	12.3	-	.7	10	1.1	-	-	9	-	-	-	-	165	.0	411	-
3	6	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76
3	9	61	.8	12.3	-	.9	12	1.4	2.8	-	5	-	-	-	-	-	.0	411	-
3	14	61	-	-	8.4	-	-	-	-	.3	-	158	208	5	40	-	-	-	42
3	16	61	.9	12.2	-	-	9	1.1	-	-	7	-	-	-	-	200	.0	406	-
3	21	61	-	-	8.3	-	-	-	-	.2	-	160	218	110	35	-	-	-	72
3	29	61	2.2	12.7	8.5	.6	16	1.2	3.0	.1	9	164	224	15	55	178	.0	429	37
4	5	61	-	-	8.4	-	-	-	-	.2	-	160	220	15	37	-	-	-	180
4	6	61	2.3	12.7	-	1.2	20	1.2	2.5	-	9	-	-	-	-	173	.0	429	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NORTH DAKOTA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN MISSOURI SOURIS RIVERS

STATION LOCATION MISSOURI RIVER AT BISMARCK, NORTH DAKOTA 33

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
4	12	61	4.0	12.3	8.3	.9	19	1.2	2.4	.2	7	162	222	5	35	170	.0	433	25
4	18	61	-	-	8.2	-	-	-	-	.2	-	160	216	22	50	-	-	-	43
4	19	61	6.6	11.6	-	.9	19	-	-	-	7	-	-	-	-	175	.0	429	-
4	25	61	-	-	8.2	-	-	-	-	.2	-	156	216	3	40	-	-	-	8
5	3	61	6.2	11.7	-	-	15	1.1	2.5	-	7	-	-	-	-	178	.0	423	71
5	9	61	-	-	8.3	-	-	-	-	.3	-	156	214	12	40	-	-	-	220
5	16	61	-	-	8.3	-	-	-	-	.3	-	134	218	15	30	-	-	-	80
5	17	61	8.9	11.4	-	.9	20	1.2	2.9	-	7	-	-	-	-	173	.0	429	-
5	23	61	-	-	8.1	-	-	-	-	.5	-	156	216	15	30	-	-	-	230
5	24	61	11.5	10.4	-	-	12	-	-	-	7	-	-	-	-	175	.0	423	-
5	31	61	-	-	8.3	-	-	-	-	.3	-	158	218	18	30	-	-	-	*1
6	1	61	13.5	10.1	-	.5	13	-	-	-	6	-	-	-	-	178	.0	449	-
6	7	61	14.9	9.7	8.2	-	12	1.2	3.8	.1	7	160	208	15	28	179	.0	417	190
6	13	61	-	-	8.0	-	-	-	-	.4	-	160	210	3	40	-	-	-	*1
6	19	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140
6	20	61	-	-	8.1	-	-	-	-	.1	-	160	212	2	35	-	-	-	-
6	21	61	14.8	9.7	-	-	14	-	-	-	7	-	-	-	-	178	.0	442	-
6	28	61	-	-	8.1	-	-	-	-	.3	-	162	214	5	30	-	-	-	820
7	5	61	-	-	8.3	-	-	-	-	.3	-	162	206	0	30	-	-	-	*1
7	11	61	-	-	8.1	-	-	-	-	.1	-	162	212	3	30	-	-	-	20
7	13	61	17.1	9.0	-	.9	15	1.5	-	-	7	-	-	-	-	170	.0	452	-
7	18	61	-	-	8.1	-	-	-	-	.1	-	164	218	2	35	-	-	-	50
7	25	61	-	-	8.1	-	-	-	-	.3	-	164	212	2	40	-	-	-	20
7	26	61	18.6	8.6	-	.8	14	1.2	3.2	-	8	-	-	-	-	166	.1	424	-
8	1	61	-	-	8.1	-	-	-	-	.3	-	160	214	3	27	-	-	-	100
8	2	61	18.3	8.6	-	-	13	1.3	3.1	-	10	-	-	-	-	173	.0	507	-
8	7	61	-	-	8.4	-	-	-	-	.0	-	48	106	0	0	-	-	-	-
8	8	61	-	-	8.1	-	-	-	-	.4	-	162	214	2	25	-	-	-	130
8	15	61	-	-	8.1	-	-	-	-	.2	-	164	216	7	35	-	-	-	120
8	18	61	17.8	8.6	-	-	16	-	-	-	8	-	-	-	-	167	.0	452	-
8	22	61	-	-	8.1	-	-	-	-	.1	-	166	216	12	30	-	-	-	100
8	29	61	-	-	8.0	-	-	-	-	.2	-	160	220	5	30	-	-	-	*1
9	5	61	-	-	8.0	-	-	-	-	.3	-	160	220	5	25	-	-	-	4
9	8	61	16.6	8.7	-	-	14	-	-	-	5	-	-	-	-	180	.0	487	-
9	11	61	-	-	8.1	-	-	-	-	.1	-	162	220	8	40	-	-	-	120
9	19	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*4
9	26	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
9	27	61	12.3	9.8	-	1.0	13	1.2	2.5	-	8	-	-	-	-	195	.0	541	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Bismarck, North Dakota
Operated by U.S. Geological Survey

STATE North Dakota

MAJOR BASIN Missouri River

MINOR BASIN Missouri-Souris Rivers

STATION LOCATION Missouri River at Bismarck, North Dakota

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	12.200	11.100	11.700	16.400	20.600	20.300	23.500	20.200	14.900	11.300	16.300	13.600
2	12.300	11.000	15.400	17.200	20.800	20.800	23.800	20.000	16.800	12.100	18.700	12.900
3	11.400	11.000	16.500	19.000	20.600	21.100	21.800	21.000	16.900	12.100	19.200	11.500
4	10.800	10.500	18.300	21.000	20.800	21.400	20.600	21.300	16.400	12.100	19.200	10.900
5	11.400	10.600	18.100	21.600	21.000	21.900	20.600	21.400	15.500	12.100	20.200	11.000
6	11.100	10.400	15.000	21.600	21.600	22.100	20.500	21.800	14.900	11.700	19.300	10.500
7	10.900	10.500	11.700	21.600	21.700	21.900	20.600	21.500	16.000	11.000	17.600	10.300
8	10.300	10.900	15.300	21.400	21.200	21.800	20.600	20.300	15.500	11.400	17.400	10.200
9	10.300	10.200	16.500	21.200	20.800	22.300	20.500	20.300	14.800	11.500	16.200	9.820
10	10.200	10.400	15.600	21.300	21.100	22.600	20.200	21.200	14.400	10.900	14.800	10.200
11	10.100	10.500	15.800	21.600	20.800	23.000	20.000	21.200	13.900	11.000	15.800	9.550
12	9.880	10.300	15.000	21.600	20.300	22.700	20.800	21.000	13.300	11.600	16.500	9.550
13	9.700	10.300	14.700	21.600	20.500	23.100	21.200	20.600	11.900	13.300	15.300	9.910
14	8.850	10.300	16.600	21.600	19.600	23.200	21.400	20.700	11.200	13.500	13.800	10.200
15	9.370	10.300	16.400	21.800	20.100	23.300	20.700	20.100	12.700	13.300	14.900	9.520
16	9.080	10.200	13.700	21.900	20.100	23.000	20.500	19.900	19.300	13.600	16.300	9.460
17	9.200	10.400	13.100	21.300	20.200	22.300	19.500	20.900	21.100	13.000	16.700	9.020
18	8.940	11.200	14.300	21.400	19.300	21.000	19.600	21.100	21.100	13.300	18.200	8.830
19	8.830	13.400	14.700	21.200	20.100	20.800	20.800	21.000	20.300	13.200	17.400	8.880
20	9.400	14.700	13.600	20.800	19.200	19.600	21.000	20.200	17.700	13.000	14.700	8.830
21	8.970	15.200	12.700	19.800	18.500	19.300	20.700	19.800	12.800	13.600	12.800	8.370
22	9.340	14.900	12.300	19.100	18.500	18.000	20.600	17.200	11.300	14.600	13.200	7.900
23	9.050	15.300	12.700	20.000	18.500	16.900	20.900	16.700	11.000	15.200	15.400	7.960
24	8.830	15.800	14.200	19.800	18.500	16.700	20.600	19.100	10.900	13.900	16.200	7.930
25	8.940	15.700	16.200	19.600	18.500	16.600	19.200	18.800	10.800	14.700	17.000	7.780
26	8.720	15.400	16.900	19.900	20.300	16.400	20.500	18.300	10.700	15.700	17.400	7.660
27	9.050	15.600	16.200	20.400	19.900	16.300	20.800	16.500	11.200	18.100	18.800	7.380
28	10.200	15.900	16.000	20.700	19.300	18.800	20.800	15.400	10.800	18.800	18.800	7.240
29	10.800	15.800	16.300	20.800		22.100	20.700	14.800	11.100	19.000	17.000	7.020
30	11.000	12.000	16.600	21.200		24.300	20.800	13.400	11.200	20.200	14.700	7.160
31	11.000		16.500	20.800		23.800		13.700		17.700	14.400	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE NORTH DAKOTA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN MISSOURI-SOURIS RIVERS

STATION LOCATION MISSOURI RIVER AT WILLISTON, NORTH DAKOTA 34

DATE SAMPLE TAKEN			DATE OF DETERMINATION		RADIOACTIVITY IN WATER: ALPHA			BETA			RADIOACTIVITY IN PLANKTON (dry): DATE OF DETERMINATION		GROSS ACTIVITY		RADIOACTIVITY IN WATER: GROSS ACTIVITY		
MO.	DAY	YEAR	MONTH	DAY	SUSPENDED μμc/l	DISSOLVED μμc/l	TOTAL μμc/l	SUSPENDED μμc/l	DISSOLVED μμc/l	TOTAL μμc/l	MO.	DAY	ALPHA μμc/g	BETA μμc/g	SUSPENDED μμc/l	DISSOLVED μμc/l	TOTAL μμc/l
10	24	60*	11	2	3	9	12	0	7	7							
11	28	60*	12	9	1	5	6	0	2	2							
12	26	60*	1	11	0	8	8	0	0	0							
1	31	61*	2	13	0	6	6	0	5	5							
2	28	61*	3	17	1	5	6	0	2	2							
3	27	61*	4	7	2	3	5	1	0	1							
4	24	61*	5	5	2	5	7	0	0	0							
5	29	61*	6	8	5	6	11	15	51	66							
6	28	61*	7	14	13	3	16	19	4	23							
7	31	61*	8	24	5	4	9	8	1	9							
8	28	61*	9	14	1	3	4	6	20	26							
9	4	61	9	28	-	-	-	1	9	10							
9	11	61	10	6	-	-	-	47	2	49							
9	18	61	10	10	-	-	-	22	24	46							
9	24	61	10	4	37	3	40	127	25	152							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE NORTH DAKOTA
MAJOR BASIN MISSOURI RIVER
MINOR BASIN MISSOURI-SOURIS RIVERS
STATION LOCATION MISSOURI RIVER AT
WILLISTON, NORTH DAKOTA 34

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS														PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE							
10	14	60	700			110		20	50	180	380	40	200	83	30	92	10	9	10	36	10	40	110						--9--
11	7	60	1300			20		50		70	1120	70	760	92	60	9	10	36	10	83	*	20	50						3--7-
11	22	60	700							160	540	20	270	92	40	36	30	9	10	83	*	20				1			3----
11	30	60	200						20		200			9	70	92	10	80	*	36	*	10	20						3----
12	16	60	400		20			50			290		110	9	50	92	10	36	*	46	*	20		10					3----
12	31	60	200								180		110														1		3----
1	13	61	100		20				20		70		90	9	40	92	10	36	10	82	10	30	20						-----
2	3	61	700					40		400	270	50	20	9	60	92	20	82	10	36	*	20				5	2		3-9--
2	17	61	300							50	290	20	200	95	40	9	20	36	10	85	*	40	20						3----
2	27	61	300					50			270		470	92	60	36	10	85	*	83	*	30							3----
3	6	61	800					90		90	620	20	270	47	30	92	20	9	10	82	10	30							3----
3	20	61	1900			20		200		240	1400	90	1070	86	10	70	10	92	10	2	10	70							3176-
4	3	61	1800					200		1130	510	110	490	92	30	82	20	36	10	9	10	40					1		--97-
4	17	61	1600			80		210		500	810	40	480	92	30	9	10	36	10	85	10	40			2	7			-197-
5	1	61	3000			170		600		1450	830	170	80	92	30	36	20	80	*	65	*	40	20						4197-
5	23	61	3500	50		340		400		870	1880	670	1410	47	20	92	20	65	10	82	10	40							78933
6	5	61	500					20		70	450		1360	92	10	12	10	54	10	33	10	70							-----
6	19	61	1900			170		60		290	1350	60	520	45	10	92	10	83	10	33	10	60							7-953
7	3	61	2700		20	170		150		810	1590	20	270	36	30	65	10	92	10	23	10	60							4-743
7	17	61	2700			380		220	20	1340	740	250	920	80	50	83	10	45	10	46	10	30	20						-89-6
8	7	61	3400			250		250		1740	1120	120	80	45	30	36	10	80	10	47	10	40							41947
8	21	61	3700		20	440		170		640	2420	100	290	75	10	45	10	36	10	92	10	70							7-963
9	5	61	2400	20		160		160	20	220	1830	110	720	92	60	75	10	46	10	80	*	20							--973
9	18	61	600			160		20		50	420	80	890										70						---6-

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE NORTH DAKOTA
MAJOR BASIN MISSOURI RIVER
MINOR BASIN MISSOURI-SOURIS RIVERS
STATION LOCATION MISSOURI RIVER AT
WILLISTON, NORTH DAKOTA 34

DATE OF SAMPLE						EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END		GALLONS FILTERED						NEUTRALS					WEAK ACIDS	STRONG ACIDS	BASES	LOSS
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS				
10	6	60	10	18	5025	109	27	82	1	8	8	1	0	7	0	3	4	1	2
11	1	60	11	12	5400	70	12	58	1	2	5	1	1	3	0	1	0	0	3
11	29	60	12	10	5250	97	17	80	0	5	6	1	1	4	0	2	1	1	2
12	28	60	1	9	5250	128	36	92	1	11	10	1	1	7	1	3	2	1	8
1	27	61	2	16	5287	112	24	88	0	7	9	1	1	6	1	3	1	1	3
3	7	61	3	24	5340	95	10	85	0	2	4	1	0	3	0	1	1	0	2
4	11	61	4	24	6075	113	39	74	2	11	11	2	1	8	0	3	3	1	8
5	28	61	6	5	5475	106	27	79	1	8	9	1	1	6	1	3	2	1	3
6	28	61	7	7	5000	89	25	64	2	7	8	2	1	5	0	3	2	0	3
8	1	61	8	12	5250	79	24	55	1	8	7	1	1	5	0	2	2	1	3
8	31	61	9	13	5250	98	16	82	0	4	6	1	0	5	0	2	1	0	3
9	29	61	10	14	5295	100	15	85	0	4	6	1	0	5	0	2	1	0	2

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NORTH DAKOTA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN MISSOURI SOURIS RIVERS

STATION LOCATION MISSOURI RIVER AT

WILLISTON, NORTH DAKOTA 34

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	13.0	-	8.3	-	-	-	-	-	-	174	248	0	150	-	-	-	-
10	10	60	12.0	-	8.4	-	-	-	-	-	-	148	250	0	115	-	-	-	-
10	17	60	12.0	-	-	-	-	-	-	-	-	150	256	-	125	-	-	-	-
10	24	60	9.0	-	-	-	-	-	-	-	-	172	242	-	400	-	-	-	-
10	31	60	8.0	-	-	-	-	-	-	-	-	162	252	-	95	-	-	-	-
11	7	60	6.0	-	-	-	-	-	-	-	-	156	246	0	10	-	-	-	-
11	14	60	3.0	-	-	-	-	-	-	-	-	172	270	-	5	-	-	-	-
11	21	60	5.0	-	-	-	-	-	-	-	-	160	250	0	0	-	-	-	-
11	28	60	-	-	-	-	-	-	-	-	-	170	262	0	0	-	-	-	-
12	5	60	2.0	-	8.2	-	-	-	-	-	-	170	274	-	-	-	-	-	-
12	12	60	2.0	-	8.2	-	-	-	-	-	-	170	266	-	-	-	-	-	-
12	19	60	2.0	-	8.2	-	-	-	-	-	-	170	256	-	-	-	-	-	-
12	26	60	1.0	-	8.3	-	-	-	-	-	-	178	276	-	-	-	-	-	-
1	4	61	1.0	-	8.2	-	-	-	-	-	-	166	262	-	-	-	-	-	-
1	10	61	1.0	-	8.1	-	-	-	-	-	-	162	240	-	-	-	-	-	-
1	17	61	2.0	-	8.1	-	-	-	-	-	-	160	240	-	-	-	-	-	-
1	24	61	1.0	-	8.2	-	-	-	-	-	-	162	268	-	20	-	-	-	-
1	31	61	1.0	-	8.2	-	-	-	-	-	-	172	260	0	25	-	-	-	-
2	7	61	2.0	-	8.2	-	-	-	-	-	-	172	250	0	25	-	-	-	-
2	14	61	1.0	-	8.1	-	-	-	-	-	-	160	250	5	40	-	-	-	-
2	20	61	1.0	-	8.1	-	-	-	-	-	-	160	240	3	31	-	-	-	-
2	28	61	2.0	-	8.2	-	-	-	-	-	-	165	230	5	92	-	-	-	-
3	6	61	2.0	-	8.2	-	-	-	-	-	-	168	230	-	84	-	-	-	-
3	14	61	2.0	-	8.2	-	-	-	-	-	-	160	234	-	80	-	-	-	-
3	21	61	2.0	-	8.1	-	-	-	-	-	-	134	204	12	300	-	-	-	-
3	27	61	4.0	-	8.1	-	-	-	-	-	-	144	236	10	210	-	-	-	210
4	3	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29
4	4	61	7.0	-	8.3	-	-	-	-	-	-	170	252	-	150	-	-	-	-
4	10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25
4	11	61	5.0	-	8.3	-	-	-	-	-	-	166	234	-	90	-	-	-	-
4	18	61	8.0	-	8.3	-	-	-	-	-	-	182	242	5	125	-	-	-	13
4	25	61	8.0	-	8.3	-	-	-	-	-	-	176	230	0	125	-	-	-	130
5	1	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	130
5	2	61	7.0	-	8.3	-	-	-	-	-	-	174	238	-	300	-	-	-	-
5	8	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
5	9	61	9.0	-	8.3	-	-	-	-	-	-	162	250	5	90	-	-	-	-
5	15	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180
5	16	61	12.0	-	8.2	-	-	-	-	-	-	162	220	-	92	-	-	-	-
5	23	61	17.0	-	8.3	-	-	-	-	-	-	162	240	5	200	-	-	-	7500
5	29	61	18.0	-	8.2	-	-	-	-	-	-	158	230	-	1000	-	-	-	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NORTH DAKOTA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN MISSOURI SOURIS RIVERS

STATION LOCATION MISSOURI RIVER AT

WILLISTON, NORTH DAKOTA 34

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
6	6	61	25.0	-	8.2	-	-	-	-	-	-	118	134	5	900	-	-	-	-
6	14	61	22.0	-	8.0	-	-	-	-	-	-	70	120	-	500	-	-	-	-
6	20	61	25.0	-	8.3	-	-	-	-	-	-	120	144	-	850	-	-	-	-
6	27	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	630
6	28	61	26.0	-	8.1	-	-	-	-	-	-	120	156	-	100	-	-	-	130
7	3	61	21.0	-	8.3	-	-	-	-	-	-	120	174	-	750	-	-	-	-
7	10	61	24.0	-	8.3	-	-	-	-	-	-	128	196	-	180	-	-	-	-
7	11	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	130
7	17	61	23.0	-	8.3	-	-	-	-	-	-	160	212	-	250	-	-	-	-
7	18	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*100
7	24	61	23.0	-	8.3	-	-	-	-	-	-	140	224	-	400	-	-	-	-
7	25	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
7	31	61	26.0	-	8.4	-	-	-	-	-	-	136	206	-	200	-	-	-	-
8	1	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>100
8	7	61	24.0	-	8.4	-	-	-	-	-	-	150	216	-	350	-	-	-	-
8	8	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
8	14	61	25.0	-	8.3	-	-	-	-	-	-	150	222	5	100	-	-	-	-
8	16	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	130
8	21	61	22.0	-	8.1	-	-	-	-	-	5	160	234	-	190	-	-	-	-
8	22	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300
8	28	61	22.0	-	8.4	-	-	-	-	-	-	174	226	0	100	-	-	-	-
8	29	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
9	4	61	16.0	-	8.4	-	-	-	-	-	-	166	248	-	150	-	-	-	-
9	11	61	14.0	-	8.4	-	-	-	-	-	-	160	234	-	195	-	-	-	-
9	12	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260
9	18	61	15.0	-	8.3	-	-	-	-	-	-	-	144	244	650	-	-	-	-
9	25	61	11.0	-	8.4	-	-	-	-	-	-	160	232	-	2000	-	-	-	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station near Williston, North Dakota
Operated by U.S. Geological Survey

STATE North Dakota

MAJOR BASIN Missouri River

MINOR BASIN Missouri-Souris Rivers

STATION LOCATION Missouri River at Williston, North Dakota

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	12.800	12.500	10.000	12.400	9.770	12.400	12.500	11.000	33.400	22.400	14.200	8.600
2	12.500	12.600	9.000	12.700	10.000	12.300	12.400	11.000	35.100	20.200	13.400	8.710
3	12.300	12.700	10.000	12.700	10.000	12.400	12.300	10.800	36.000	22.800	11.000	9.210
4	12.300	12.700	10.000	12.600	10.000	12.500	12.300	10.700	33.900	22.500	10.400	9.520
5	12.300	12.800	10.000	12.100	10.100	12.600	12.300	10.700	31.400	21.500	9.960	9.990
6	12.100	12.800	11.000	11.500	10.200	12.600	12.200	10.600	31.400	20.800	9.600	11.400
7	12.000	12.900	10.000	11.400	10.600	12.800	12.100	10.400	31.700	20.200	9.330	11.700
8	11.800	13.100	10.000	12.100	11.600	13.000	11.900	10.100	32.800	19.700	9.090	11.700
9	11.600	13.300	10.000	12.500	12.100	12.800	11.800	9.880	34.600	19.400	8.780	12.900
10	11.400	13.600	10.000	12.600	12.300	12.800	11.700	9.990	34.400	18.800	8.440	14.000
11	10.800	13.600	10.000	12.300	12.200	13.000	11.600	10.000	33.600	19.200	8.400	13.200
12	11.000	13.600	10.000	11.700	12.000	13.200	11.700	10.000	34.400	20.000	8.520	13.500
13	11.500	13.400	10.000	12.100	11.800	13.400	11.700	10.000	36.200	21.300	8.460	16.300
14	11.700	13.200	9.000	13.100	11.700	13.800	11.400	10.000	37.900	19.800	8.500	19.300
15	12.400	13.100	9.000	13.500	11.600	14.200	11.200	9.910	37.500	18.000	8.690	19.200
16	13.900	13.200	9.000	13.500	11.500	15.000	11.000	9.570	35.500	16.700	9.180	20.400
17	14.300	13.400	9.000	13.400	11.500	15.100	10.900	9.350	32.900	16.100	9.570	20.200
18	13.700	13.500	9.000	13.200	11.400	15.500	10.700	9.180	30.900	16.000	9.570	19.000
19	13.200	13.300	9.000	13.200	11.300	17.000	10.300	9.490	29.200	15.900	9.300	18.200
20	13.000	13.100	9.000	12.900	10.900	17.800	10.400	10.300	28.000	15.600	8.180	19.000
21	13.000	12.900	9.000	12.100	10.500	18.000	10.600	11.600	27.700	15.300	8.420	20.600
22	13.300	13.000	9.000	11.700	10.800	18.600	10.700	13.400	27.300	14.800	8.780	21.000
23	13.100	12.400	9.000	10.700	11.300	21.600	10.800	13.800	26.900	14.300	8.800	26.200
24	12.900	13.800	8.000	9.500	11.800	16.200	10.500	13.400	26.400	14.200	8.710	28.600
25	12.900	12.500	7.000	8.730	12.400	13.800	10.300	13.800	25.600	14.100	8.670	27.000
26	12.900	12.700	7.000	8.850	12.700	13.100	10.500	14.400	24.500	14.000	8.620	24.900
27	12.700	12.700	6.500	8.820	12.100	13.100	10.200	15.500	23.200	14.200	8.600	24.200
28	12.700	12.500	8.000	8.220	12.300	12.900	9.800	18.900	21.800	14.400	8.380	25.000
29	12.500	11.000	9.000	8.110		12.700	10.300	23.500	20.700	14.200	8.340	25.000
30	12.300	12.000	10.000	8.570		12.700	11.100	27.100	19.200	12.200	8.820	25.000
31	12.300		11.000	9.140		12.700		30.200		11.400	8.690	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE PENNSYLVANIA

MAJOR BASIN OHIO RIVER

MINOR BASIN MONONGAHELA RIVER

STATION LOCATION MONONGAHELA RIVER AT PITTSBURGH, PENNSYLVANIA 83

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$		MO.	DAY	$\mu\mu c/g$	$\mu\mu c/g$		$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$
6	20	61	7	28	0	0	0	0	0	0									
6	27	61	7	27	0	0	0	0	0	0									
7	5	61	8	4	0	1	1	0	0	0									
7	11	61	8	10	0	0	0	0	0	0									
7	17	61	8	7	0	0	0	0	0	0									
7	25	61	8	8	0	0	0	0	0	0									
8	8	61	9	1	0	0	0	0	5	5									
8	15	61	9	12	0	1	1	3	6	9									
8	22	61	9	25	0	1	1	0	0	0									
8	29	61	9	27	0	1	1	3	13	16									
9	5	61	10	5	0	0	0	0	7	7									
9	12	61	10	10	0	0	0	0	7	7									
9	19	61	10	16	0	0	0	6	15	21									
9	26	61	10	10	0	0	0	0	2	2									

PHS-2645.5
REV. 4-61

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE PENNSYLVANIA
MAJOR BASIN OHIO RIVER
MINOR BASIN MONONGAHELA RIVER
STATION LOCATION MONONGAHELA RIVER AT
PITTSBURGH, PENNSYLVANIA 83

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
8	8	61	1500		20			1490																					---3-
8	21	61	300			20		270					20																---3-
9	5	61	700		20	170		500		20	20																		---3-
9	19	61	200			100		100			20														77	2			-----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE PENNSYLVANIA

MAJOR BASIN OHIO RIVER

MINOR BASIN MONONGAHELA RIVER

STATION LOCATION MONONGAHELA RIVER AT PITTSBURGH, PENNSYLVANIA 83

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
6	20	61	6	29	3687	289	152	137	15	46	40	6	5	27	2	15	18	2	16
8	9	61	8	17	5697	251	100	151	11	26	26	9	4	12	1	9	7	1	20
9	19	61	9	28	5167	254	76	178	4	18	24	6	3	15	0	10	8	1	11

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE PENNSYLVANIA

MAJOR BASIN OHIO RIVER

MINOR BASIN MONONGAHELA RIVER

STATION LOCATION MONONGAHELA RIVER AT

PITTSBURGH, PENNSYLVANIA 83

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
6	13	61	23.9	-	5.9	-	-	-	-	-	4	4	98	-	115	115	-	174	-
6	20	61	23.9	-	6.2	-	-	-	-	-	3	4	72	-	25	93	-	148	-
6	27	61	24.4	-	5.6	-	-	-	-	-	7	3	120	-	25	159	-	181	-
7	6	61	23.5	-	5.5	-	-	-	-	-	5	3	88	-	25	153	-	283	-
7	11	61	23.5	-	5.5	-	-	-	-	-	5	3	106	-	25	159	-	261	-
7	18	61	25.9	-	5.1	-	-	-	-	-	5	2	100	-	0	158	-	143	-
7	25	61	28.2	-	4.4	-	-	-	-	-	7	1	118	-	0	212	-	356	-
8	1	61	31.1	-	4.4	-	-	-	-	-	9	4	116	-	25	218	-	254	-
8	8	61	25.8	-	4.3	-	-	-	-	-	6	2	78	-	25	125	-	200	-
8	15	61	25.4	-	4.4	-	-	-	-	-	6		66	-	25	118	-	204	-
8	22	61	25.8	-	4.9	-	-	-	-	-	5	2	88	-	25	135	-	226	-
8	29	61	27.5	-	6.3	-	-	-	-	-	8	5	94	-	25	144	-	189	-
9	5	61	28.0	-	6.0	-	-	-	-	-	8	4	106	-	25	164	-	218	-
9	12	61	28.8	-	6.4	-	-	-	-	-	10	5	100	-	25	173	-	218	-
9	19	61	24.0	-	5.6	-	-	-	-	-	10	2	111	-	25	200	-	331	
9	26	61	21.8	-	4.6	-	-	-	-	-	11	2	126	-	25	208	-	399	

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Braddock, Pennsylvania
Operated by U.S. Geological Survey

STATE Pennsylvania

MAJOR BASIN Ohio River

MINOR BASIN Monongahela River

STATION LOCATION Monongahela River at Pittsburgh, Pennsylvania

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	3.480	4.000	3.200	18.000	4.000	42.900	22.400	25.000	6.800	8.400	4.900	2.780
2	2.970	5.600	3.680	17.000	5.000	42.900	30.400	26.800	11.600	5.250	5.800	2.870
3	2.900	6.300	3.850	16.000	4.500	40.700	25.000	26.800	26.300	4.550	14.500	2.970
4	3.400	5.600	3.000	14.200	4.000	40.700	22.400	25.000	31.300	8.100	22.400	2.840
5	3.160	4.850	2.500	12.800	3.000	55.700	20.800	20.000	24.100	5.800	15.600	3.360
6	3.080	4.300	2.710	11.100	3.000	64.500	17.400	15.600	19.600	8.120	10.500	4.050
7	3.080	5.000	3.360	11.800	5.000	52.100	14.900	17.000	16.000	18.400	7.800	3.200
8	3.080	8.100	3.200	11.400	4.800	44.000	13.500	23.800	15.200	13.800	7.800	2.940
9	2.810	9.000	3.120	11.400	4.500	52.100	10.200	34.200	16.600	9.300	6.100	3.000
10	2.710	8.700	3.440	11.100	4.500	50.900	8.400	25.900	29.200	6.100	4.750	2.680
11	3.120	11.400	2.740	9.300	5.000	46.200	19.400	24.100	38.500	5.400	4.850	2.470
12	2.870	14.200	2.300	9.000	6.000	45.100	25.000	25.000	30.400	4.600	12.700	2.680
13	2.650	14.200	2.470	8.100	7.000	42.900	32.200	22.400	29.500	4.450	23.200	2.680
14	2.560	11.800	3.120	8.100	15.000	36.300	36.300	15.600	29.500	6.380	15.600	2.590
15	2.500	10.200	3.280	8.400	50.000	32.200	35.200	8.700	30.400	9.300	15.600	2.470
16	2.210	9.000	3.320	9.000	45.000	34.200	37.400	10.200	26.800	7.550	13.800	2.440
17	2.020	7.550	3.850	16.600	35.000	30.400	37.400	11.800	20.800	5.700	9.300	2.270
18	2.320	6.300	3.280	16.600	45.300	25.900	32.200	9.900	10.800	7.800	5.550	2.040
19	2.710	5.700	3.160	15.600	63.200	22.400	30.400	9.000	7.550	9.900	4.450	2.300
20	3.320	5.100	3.800	13.800	72.800	25.900	28.600	9.300	7.050	10.800	4.450	3.170
21	3.950	4.000	4.200	12.400	45.100	28.600	25.000	8.700	7.300	9.900	7.050	5.800
22	5.150	4.700	3.720	8.100	32.200	42.600	27.700	6.550	9.300	10.500	6.550	5.550
23	4.050	5.300	3.900	6.550	38.500	48.500	39.600	7.800	9.300	8.100	4.500	4.100
24	3.080	4.950	4.400	5.450	52.100	36.300	36.300	7.550	7.300	5.750	3.480	3.200
25	3.000	3.720	3.320	5.950	45.100	32.200	33.200	7.300	5.300	7.050	3.760	2.840
26	3.080	3.900	3.240	5.450	68.600	26.800	58.100	6.550	4.550	7.800	3.720	3.000
27	3.160	3.000	3.400	5.400	54.800	21.600	45.100	7.550	4.900	6.100	3.520	7.740
28	3.900	2.470	7.800	4.950	39.600	19.200	32.200	8.100	4.700	5.650	3.200	2.620
29	3.800	2.810	9.300	3.850		20.000	28.600	5.550	4.500	6.050	3.600	2.500
30	3.120	3.200	12.600	3.480		21.600	29.500	7.300	5.010	5.600	3.000	2.440
31	3.200		20.000	3.440		19.600		5.150		5.250	2.840	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE NEBRASKA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN NORTH PLATTE RIVER

STATION LOCATION NORTH PLATTE RIVER ABOVE HENRY, NEBRASKA 94

DATE SAMPLE TAKEN			DATE OF DETERMINATION		RADIOACTIVITY IN WATER							RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
					ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
8	21	61	9	27	0	16	16	0	5	5									
8	28	61	9	26	0	109	109	1	29	30									
9	5	61	9	29	1	26	27	3	40	43									
9	11	61	10	24	4	19	23	4	34	38									
9	18	61	10	27	1	22	23	2	20	22									
9	25	61	10	4	0	28	28	31	34	65									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE NEBRASKA
MAJOR BASIN MISSOURI RIVER
MINOR BASIN NORTH PLATTE RIVER
STATION LOCATION NORTH PLATTE RIVER ABOVE HENRY, NEBRASKA 94

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
			TOTAL	BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR		COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
8	21	61	2700		210	40	20	250		1040	1120	60	460	15	20	36	20	6	10	2	10	40			8	1			4-9-7

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE NEBRASKA
MAJOR BASIN MISSOURI RIVER
MINOR BASIN NORTH PLATTE RIVER
STATION LOCATION NORTH PLATTE RIVER ABOVE HENRY, NEBRASKA

94

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
9	9	61	9	18	2678	207	37	170	2	8	16	4	2	10	0	3	2	0	6

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NEBRASKA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN NORTH PLATTE RIVER

STATION LOCATION NORTH PLATTE RIVER ABOVE HENRY, NEBRASKA

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
8	21	61	24.5	-	8.7	-	-	-	-	-	22	175	-	-	-	-	-	-	-
8	28	61	21.9	-	8.3	-	-	5.3	-	-	26	190	-	-	-	-	-	-	800
9	5	61	14.0	6.1	8.1	2.0	-	5.3	27.5	-	23	190	-	-	-	-	-	-	2000
9	11	61	15.0	5.6	8.1	1.2	-	12.5	93.5	-	23	189	-	-	-	-	-	-	1400
9	18	61	18.0	5.4	8.1	1.3	-	11.6	24.4	-	22	190	-	20	38	-	-	-	170
9	25	61	11.5	9.4	8.1	2.6	-	12.0	73.6	-	23	190	290	6	25	-	-	-	1000

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Wyoming-Nebraska State Line
Operated by U.S. Geological Survey

STATE Nebraska

MAJOR BASIN Missouri River

MINOR BASIN North Platte River

STATION LOCATION North Platte River above Henry, Nebraska

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	.374	.275	.280	.260	.234	.206	.210	.210	.214	1.050	.796	.422
2	.310	.275	.290	.260	.234	.203	.210	.206	.206	1.250	.593	.386
3	.280	.275	.295	.275	.234	.210	.210	.203	.210	1.280	.452	.386
4	.189	.275	.325	.265	.234	.210	.210	.210	.210	1.340	.392	.428
5	.180	.280	.310	.260	.226	.226	.206	.206	.226	1.390	.335	.537
6	.168	.280	.295	.255	.222	.226	.203	.200	.255	1.420	.684	.628
7	.164	.290	.285	.265	.214	.226	.203	.189	.315	1.460	1.020	.600
8	.180	.290	.265	.260	.206	.226	.218	.186	.325	1.560	1.120	.600
9	.200	.295	.275	.265	.206	.230	.214	.050	.356	1.510	1.260	.656
10	.222	.295	.275	.280	.210	.234	.218	.015	.374	1.460	1.150	.677
11	.302	.295	.275	.265	.218	.214	.222	.014	.380	1.360	1.060	.684
12	.335	.300	.270	.265	.218	.210	.230	.013	.206	1.230	1.030	.733
13	.320	.300	.265	.280	.214	.200	.242	.091	.210	1.170	1.030	.719
14	.310	.300	.270	.270	.210	.200	.255	.464	.218	1.060	1.000	.719
15	.315	.310	.275	.265	.210	.200	.242	.285	.203	1.000	.976	.747
16	.310	.305	.265	.260	.206	.203	.238	.172	.178	1.090	.968	.733
17	.310	.295	.255	.260	.214	.203	.260	.164	.168	1.130	1.020	.726
18	.305	.290	.260	.260	.214	.203	.265	.178	.161	1.100	1.000	.740
19	.300	.285	.280	.242	.203	.206	.265	.250	.138	1.100	.976	.761
20	.290	.285	.280	.238	.203	.206	.255	.242	.125	1.190	.831	.761
21	.285	.285	.275	.246	.214	.210	.250	.260	.122	1.280	.712	.761
22	.275	.285	.275	.226	.218	.214	.246	.255	.102	1.190	.712	.782
23	.275	.285	.275	.230	.218	.210	.246	.246	.070	1.190	.691	.642
24	.270	.280	.280	.246	.218	.214	.238	.234	.055	1.190	.677	.565
25	.270	.275	.280	.246	.214	.214	.238	.222	.055	1.170	.656	.434
26	.275	.275	.275	.240	.210	.210	.226	.218	.055	1.180	.635	.368
27	.275	.275	.280	.235	.206	.214	.230	.222	.055	1.170	.593	.340
28	.275	.270	.265	.230	.206	.214	.222	.222	.055	1.140	.530	.330
29	.275	.270	.285	.226		.214	.218	.226	.158	1.270	.494	.320
30	.275	.265	.255	.222		.214	.210	.218	.816	1.030	.464	.315
31	.275		.265	.230		.214		.214		1.280	.452	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE ILLINOIS

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT

CAIRO, ILLINOIS 35

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA			DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	11	60*	10	21	0	1	1	0	15	15							
10	24	60*	11	8	-	-	-	2	23	25							
11	7	60*	11	23	0	1	1	13	6	19							
11	21	60*	12	22	1	1	2	2	9	11							
12	12	60	1	3	2	0	2	5	2	7							
12	19	60	1	19	-	-	-	2	9	11							
1	9	61	1	27	1	2	3	0	0	0							
1	30	61*	2	14	-	-	-	7	0	7							
2	13	61*	3	1	1	0	1	0	0	0							
2	27	61*	3	13	-	-	-	7	0	7							
3	14	61*	3	29	2	0	2	15	3	18							
3	27	61*	4	6	-	-	-	9	1	10							
4	10	61*	5	2	1	0	1	7	0	7							
4	24	61*	5	15	-	-	-	6	2	8							
5	8	61*	5	24	1	1	2	5	2	7							
5	31	61*	6	12	-	-	-	4	5	9							
6	12	61	7	6	10	3	13	0	0	0							
6	26	61*	7	26	-	-	-	0	0	0							
7	11	61*	8	3	0	1	1	0	9	9							
7	31	61	8	29	-	-	-	10	7	17							
8	7	61	9	19	3	1	4	6	9	15							

PHS-2645-5
REV. 4-61

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE ILLINOIS

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT CAIRO, ILLINOIS

35

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	3	60	200			110			50	90		20		82	30	26	30	56	10	70	*	30	40		3	1			------
10	11	60	200		20	20			20	50	70	20	90	26	20	82	20	10	10	57	10	40	110						------
10	24	60	100			20				70	20			70	30	7	10	82	10	10	10	40				1			------
11	7	60	100			20					50			56	20	26	20	82	20	10	10	40	50		1				------
11	21	60	200			40		40	20	40	20	70		56	70	10	10	82	10	26	*	10	20			1			------
12	5	60	1700	20		50		70		1500	110	220	20	82	60	26	10	56	10	57	*	20	50						4-9-7
12	19	60	9100	50	50	380	20	420		6540	1700	750	180	82	30	56	30	57	20	89	10	10	160	10	50	1			4-977
1	9	61	4900	20	20	490		510	50	2440	1390	2010	1210	56	60	89	20	26	*	58	*	20	130	10	10				42-77
1	23	61	3200		20	90		50		2350	670	1920	650	61	60	89	20	26	10	57	*	20		20			1		4--77
2	6	61	7300			20		50	20	6970	200	980	160	82	40	56	30	80	20	57	10	10		10	5		2		--9-7
2	20	61	1600					50		1120	470	290	510	56	30	58	10	92	10	33	*	50							4--77
3	7	61	1200				20			780	380	360	540	56	50	92	20	47	10	36	10	30	800						--7-7
3	20	61	300						20	250	50	90	130	56	20	82	20	26	10	58	10	50							------
4	3	61	800			90		70	20	360	240	160	240	82	20	26	20	23	10	56	10	50							--9--
4	17	61	1400					50	20	1230	130	380	380	82	20	26	10	56	10	92	10	50							4-9--
5	1	61	1400			130		130	20	540	580	270	440	56	30	92	10	86	10	26	10	40							-4-7-
5	15	61	200					40		90	70	110	110	56	30	92	20	58	10	82	10	40	20						------
6	12	61	1100			110		90	20	560	290	380	380	56	50	58	20	92	10	89	10	20			1	3			--9-7
6	19	61	300			40				110	130	310	760	92	40	62	10	56	10	21	*	40	20						------
7	5	61	1700			180		150		1350	60	810	120	82	40	56	20	80	10	58	10	20				3			--9-7
7	17	61	1800	20		440		60		1060	190	700	210	45	60	56	40	58	*	80	*	*			5	7			4-9-7
8	7	61	700			90		20		510	50	470	180	56	40	26	10	62	10	58	10	30	20						4-----
8	22	61	200	20				20		20		70	50	56	70	58	10	26	10	92	*	10	20		1	1			------
9	4	61	300					70		160	50	90	20	82	50	56	10	84	10	26	10	20			2		1	1	------
9	27	61	1700	110	20	580	90	20	50	580	90	510	20	26	60	56	30	10	*	89	*	10			69	2			48---

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE ILLINOIS

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT

CAIRO, ILLINOIS 35

DATE OF SAMPLE: BEGINNING MONTH	DAY	YEAR	END MONTH	DAY	GALLONS FILTERED	EXTRACTABLES: TOTAL	CHLORO-FORM	ALCOHOL	CHLOROFORM EXTRACTABLES: ETHER INSOLUBLES	WATER SOLUBLES	NEUTRALS: TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	11	60	10	22	4519	185	40	145	1	11	12	1	1	9	1	5	4	1	6
11	15	60	11	23	4281	190	63	127	1	12	23	2	2	18	1	9	5	1	12
12	12	60	12	19	3202	200	57	143	11	13	23	3	2	18	0	6	3	1	0
1	6	61	1	16	1765	333	109	224	8	20	51	7	7	35	2	13	4	2	11
2	16	61	3	3	1964	438	123	315	0	17	65	11	9	40	5	14	7	3	17
3	24	61	4	2	3305	266	53	213	1	10	22	4	3	14	1	8	3	1	8
4	20	61	4	30	3312	225	56	169	1	3	21	4	3	13	1	7	3	1	20
5	26	61	6	2	3593	163	62	101	1	15	23	5	3	12	3	6	5	1	11
6	20	61	7	3	3487	185	87	98	5	22	24	6	3	15	0	10	10	1	15
7	18	61	7	31	3125	192	69	123	2	14	23	4	2	14	3	8	6	1	15
8	28	61	9	5	4262	127	43	84	1	10	15	3	1	10	1	5	3	1	8
9	28	61	10	9	4422	143	48	95	1	12	18	2	2	13	1	5	3	2	7

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE ILLINOIS

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT

CAIRO, ILLINOIS 35

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	24.5	7.2	7.6	1.2	-	.6	3.0	.0	13	54	100	-	100	-	-	-	-
10	11	60	23.0	7.7	8.0	.8	-	.7	3.3	.0	12	70	104	-	35	-	-	-	-
10	17	60	22.8	7.8	7.4	.8	-	.7	3.2	.0	15	62	116	-	28	-	-	-	-
10	24	60	19.0	8.7	7.5	.7	-	.7	2.8	.0	17	60	80	-	20	-	-	-	20
10	31	60	17.2	9.0	7.2	.8	-	.6	2.8	.0	19	40	100	-	67	-	-	-	-
11	7	60	14.0	10.1	8.0	.7	-	.8	2.9	.0	19	60	100	-	20	-	-	-	-
11	14	60	12.0	11.8	8.0	1.2	-	.7	2.8	.2	26	80	150	0	15	-	-	-	-
11	21	60	12.0	10.5	7.5	.7	-	.6	2.9	.0	19	64	128	-	12	-	-	-	59
11	28	60	13.0	10.7	7.5	.9	-	.5	2.6	.1	20	63	106	-	15	-	-	-	-
12	5	60	10.0	13.1	7.8	2.1	-	.4	2.2	.1	24	66	120	-	15	-	-	-	-
12	12	60	7.0	12.9	7.7	2.4	-	.4	2.4	.0	22	60	120	-	150	-	-	-	5000
12	19	60	5.1	15.5	8.0	3.8	-	.4	2.0	.1	26	73	136	-	33	-	-	-	160
12	27	60	5.0	16.2	7.5	3.2	-	.5	2.2	.0	25	70	130	-	15	-	-	-	-
1	9	61	3.1	15.0	7.8	2.8	-	.5	2.0	.4	9	92	190	-	240	-	-	-	-
1	16	61	4.8	13.6	8.1	3.8	-	.5	2.6	.1	32	75	134	-	160	-	-	-	-
1	23	61	2.9	12.4	7.8	5.3	-	.7	2.8	.2	26	72	140	-	380	-	-	-	-
1	30	61	1.6	15.7	7.3	3.8	-	.5	2.6	1.0	18	66	116	-	130	-	-	-	1400
2	6	61	2.0	17.8	7.5	5.2	-	.5	3.0	.2	20	75	104	-	63	-	-	-	-
2	13	61	4.0	15.2	7.5	3.6	-	.4	2.4	2.0	25	88	130	-	180	-	-	-	-
2	20	61	6.2	12.8	8.0	2.5	-	.4	2.6	3.0	32	83	140	-	200	-	-	-	2000
2	27	61	7.0	12.3	7.3	3.3	-	.4	4.0	3.0	20	58	118	-	250	-	-	-	-
3	7	61	9.5	11.1	7.3	2.9	-	.4	3.0	4.0	12	60	100	0	385	-	-	-	6300
3	14	61	9.8	11.2	7.5	1.6	-	.4	2.9	.0	12	58	106	-	260	-	-	-	-
3	20	61	9.5	11.4	7.5	2.0	-	.6	3.0	-	13	62	116	-	130	-	-	-	-
3	27	61	9.5	10.6	7.5	1.8	-	.5	3.4	.0	13	66	122	-	150	-	-	-	-
4	3	61	10.0	11.6	7.8	1.3	-	.5	3.6	.0	13	76	140	-	140	-	-	-	-
4	10	61	10.0	11.9	7.5	2.2	-	.4	3.0	.0	14	80	130	-	170	-	-	-	-
4	17	61	9.9	11.3	7.8	1.8	-	.5	3.4	.0	15	74	136	-	210	-	-	-	-
4	24	61	13.0	10.9	7.5	1.9	-	.6	3.2	.0	14	75	120	-	175	-	-	-	-
5	1	61	14.6	9.9	7.5	1.8	-	.4	3.2	.0	13	68	128	-	175	-	-	-	-
5	8	61	15.9	8.9	7.4	1.5	-	.5	3.4	.0	14	72	118	-	230	-	-	-	-
5	15	61	17.8	8.6	7.4	2.0	-	.6	3.5	.0	10	60	90	-	280	-	-	-	-
5	22	61	19.0	8.0	7.5	2.3	-	.6	3.0	.0	10	70	100	-	120	-	-	-	-
5	31	61	20.0	7.2	7.8	1.8	-	.5	3.0	.0	14	95	140	-	85	-	-	-	-
6	12	61	25.0	7.7	7.7	1.4	-	.5	3.0	.0	20	95	160	-	195	-	-	-	2600000
6	19	61	23.2	7.1	7.9	1.4	-	.6	3.2	.0	18	90	150	-	350	-	-	-	-
6	26	61	23.0	6.9	7.5	.9	-	.6	3.4	.0	13	70	130	-	300	-	-	-	-
7	5	61	27.0	8.8	7.8	1.4	-	.5	3.2	.0	11	80	116	-	65	-	-	-	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE ILLINOIS

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT

CAIRO, ILLINOIS 35

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	11	61	26.9	10.3	8.0	2.1	-	.6	3.2	.0	15	80	134	-	48	-	-	-	-
7	17	61	26.5	8.1	8.0	1.9	-	.5	3.2	.0	13	80	122	-	85	-	-	-	-
7	24	61	26.9	6.3	7.7	.7	-	.6	3.3	.0	19	82	75	-	165	-	-	-	-
7	31	61	28.2	6.6	7.4	1.2	-	.5	3.2	.0	22	67	142	-	190	-	-	-	-
8	7	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9100
8	8	61	28.2	6.5	7.7	.9	-	.6	3.3	2.0	22	73	142	-	250	-	-	-	-
8	15	61	27.8	7.4	7.6	1.4	-	.5	3.4	1.0	19	66	120	-	140	-	-	-	-
8	22	61	26.8	7.7	7.5	.9	-	.6	3.6	.0	19	60	120	-	85	-	-	-	-
8	29	61	27.2	7.9	7.5	.9	-	.6	3.4	.0	19	78	124	-	60	-	-	-	-
9	5	61	27.8	7.2	7.5	.5	-	.6	3.4	.0	16	64	112	-	50	-	-	-	-
9	11	61	28.8	9.3	7.6	.9	-	.7	3.7	.0	16	76	126	-	33	-	-	-	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Metropolis, Illinois
Operated by U.S. Geological Survey

STATE Illinois

MAJOR BASIN Ohio River

MINOR BASIN Ohio River-Main Stem & Minor Trib.

STATION LOCATION Ohio River at Cairo, Illinois

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	64.900	83.400	124.000	196.000	105.000	651.000	557.000	531.000	190.000	136.000	163.000	111.000
2	60.500	90.400	117.000	219.000	98.900	683.000	537.000	551.000	175.000	143.000	179.000	115.000
3	53.300	75.100	115.000	239.000	106.000	705.000	516.000	561.000	176.000	144.000	195.000	122.000
4	66.300	88.500	114.000	243.000	110.000	711.000	488.000	571.000	182.000	127.000	184.000	123.000
5	67.800	92.200	105.000	246.000	113.000	722.000	451.000	571.000	195.000	126.000	190.000	110.000
6	77.100	94.100	110.000	232.000	117.000	747.000	435.000	583.000	194.000	128.000	197.000	106.000
7	83.200	92.800	97.200	217.000	122.000	753.000	442.000	609.000	196.000	130.000	205.000	103.000
8	87.000	82.200	94.400	211.000	137.000	792.000	423.000	629.000	198.000	119.000	212.000	113.000
9	79.800	93.300	94.400	176.000	138.000	869.000	413.000	659.000	221.000	115.000	218.000	121.000
10	83.800	109.000	102.000	134.000	150.000	935.000	406.000	678.000	282.000	109.000	225.000	111.000
11	79.200	106.000	118.000	141.000	176.000	963.000	384.000	715.000	295.000	132.000	218.000	94.100
12	84.400	118.000	109.000	134.000	201.000	911.000	380.000	760.000	285.000	125.000	186.000	102.000
13	73.400	122.000	109.000	131.000	204.000	896.000	391.000	844.000	292.000	119.000	133.000	99.900
14	74.400	124.000	124.000	119.000	208.000	901.000	419.000	839.000	311.000	109.000	154.000	105.000
15	73.100	114.000	120.000	122.000	199.000	923.000	459.000	865.000	369.000	122.000	169.000	94.400
16	84.400	116.000	114.000	142.000	203.000	934.000	496.000	888.000	415.000	148.000	194.000	78.800
17	85.500	109.000	119.000	187.000	204.000	909.000	522.000	912.000	440.000	154.000	186.000	25.400
18	68.800	111.000	105.000	178.000	197.000	887.000	540.000	938.000	445.000	161.000	172.000	41.000
19	84.000	110.000	107.000	193.000	218.000	880.000	559.000	931.000	428.000	194.000	158.000	73.300
20	88.700	97.700	103.000	215.000	246.000	868.000	560.000	909.000	426.000	202.000	108.000	58.900
21	85.900	88.900	104.000	239.000	283.000	851.000	550.000	871.000	432.000	207.000	103.000	63.500
22	86.600	92.700	111.000	250.000	385.000	845.000	547.000	806.000	434.000	216.000	97.200	81.200
23	83.100	94.100	119.000	262.000	469.000	826.000	548.000	732.000	429.000	218.000	105.000	89.600
24	82.400	108.000	117.000	267.000	509.000	807.000	553.000	658.000	398.000	218.000	124.000	86.300
25	84.700	103.000	106.000	250.000	527.000	757.000	545.000	538.000	355.000	219.000	123.000	92.500
26	90.100	103.000	99.100	229.000	549.000	716.000	551.000	498.000	310.000	232.000	118.000	96.600
27	90.900	86.900	96.000	175.000	584.000	691.000	535.000	410.000	273.000	234.000	111.000	62.800
28	78.300	90.200	99.700	108.000	619.000	650.000	519.000	348.000	223.000	230.000	105.000	57.700
29	77.700	102.000	116.000	113.000		613.000	513.000	295.000	163.000	213.000	117.000	55.400
30	63.100	109.000	123.000	116.000		571.000	513.000	248.000	153.000	194.000	122.000	64.000
31	87.000		138.000	117.000		549.000		214.000		184.000	118.000	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE INDIANA

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT
EVANSVILLE, INDIANA 36

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	24	60*	11	2	0	2	2	0	0	0									
11	28	60*	12	6	0	1	1	0	0	0									
12	5	60	1	19	0	0	0	0	1	1									
12	27	60*	1	10	0	1	1	0	0	0									
1	30	61*	2	8	2	0	2	11	0	11									
2	27	61*	3	9	4	0	4	2	0	2									
3	27	61*	4	10	0	0	0	0	0	0									
4	24	61*	5	8	2	0	2	0	0	0									
5	22	61*	6	23	0	0	0	6	11	17									
6	26	61*	7	13	1	2	3	0	0	0									
7	24	61*	8	30	1	1	2	0	3	3									
8	28	61*	9	13	1	0	1	5	4	9									
9	5	61	9	29	-	-	-	0	14	14									
9	11	61	10	12	0	1	1	0	4	4									
9	18	61	10	16	0	0	0	0	5	5									
9	25	61	10	3	-	-	-	0	8	8									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE INDIANA

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT

EVANSVILLE, INDIANA 36

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS														PROTOZOA (No. per ml.)	ROTIFIERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE							
10	3	60	1300			70	70	130	20	870	130	180		56	90	58	*	92	*	26	*		110	40	30	8	1		----7
10	17	60	4900	250	360	780	90		900	2170	270	220		56	70	92	10	82	10	26	*	10	50	10	12	4			--327
11	14	60	2300	20	200	670		50	90	1300		180	20	56	80	26	*	82	*	92	*	10	20		16	9			-28-7
12	5	60	5300			740		220	310	3510	540	430	180	56	70	57	10	82	10	92	10	10			54	1			78927
12	19	60	3800	70	20	440		1060		510	1740	180	130	89	30	9	30	56	20	57	20	*	20	20	844	1			38-37
1	3	61	15500	180	50	2500	70	1700	20	8250	2840	2520	2840	56	70	57	10	89	10	82	*	10		10	2				71927
1	16	61	700			90	20		20	360	180	200	160	56	50	58	10	92	10	89	10	30	20	20					----7
2	6	61	200							110	90	180	90	56	40	58	10	92	10	89	10	40							-----
2	20	61	700			20		20		470	200	340	470	56	60	58	20	92	*	89	*	20							----7
3	6	61	800					20		470	360	360	510	82	40	92	20	58	10	36	*	30	50				2		--977
3	20	61	400						20	110	270	70	250																-----
4	17	61	1200			20		190		540	440	190	190	56	10	86	10	52	10	26	10	70			7		3		4---7
5	1	61	1000							230	750	60	410	92	30	56	10	21	10	36	10	50							---7-
5	15	61	200								160	90	50	56	20	92	20	52	10	86	*	50			1	2	1		-----
6	5	61	7400	20	20	2730		250		3370	970	500	250	84	30	56	30	89	20	59	10	20			284	24	1		78927
6	19	61	1100			40		60		370	580	190	350	92	50	56	10	71	10	62	10	30							--97-
7	3	61	3300		20	410		150	20	2670	60	210	100	56	40	58	20	80	20	82	10	10			89	4	1		--9-7
7	17	61	400			60				270	80	40	60	56	30	89	10	80	10	58	10	30			18	25			----7
8	7	61	1200			170		80		680	290	310	100	56	50	58	10	26	*	80	*	30			4		3		----7
8	28	61	2500	80		310		170		1700	250	410	80	56	80	58	10	82	*			*		10	8				--9-7
9	5	61	3600			160	70	830	20	2320	220	760	310	56	80	47	10	82	*	80	*	10				1			-19-7
9	18	61	5500	410	350	2450	90	370	20	480	390	40	60	89	60	56	20	82	10	26	*	10		10	999	114	1		12325

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE INDIANA

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT

EVANSVILLE, INDIANA 36

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	4	60	10	14	314	*	-	-	-	-	-	-	-	-	-	-	-	-	-
2	6	61	2	27	5000	197	75	122	1	11	38	5	6	26	1	8	5	1	11
3	2	61	3	30	464	*	-	-	-	-	-	-	-	-	-	-	-	-	-

*SAMPLE NOT PROCESSED-FLOW TOO LOW

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE INDIANA
MAJOR BASIN OHIO RIVER
MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.
STATION LOCATION OHIO RIVER AT
EVANSVILLE, INDIANA 36

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	23.3	-	7.6	-	-	-	-	-	40	76	142	-	12	-	.2	-	1900
10	10	60	22.3	-	7.8	-	-	-	-	-	40	75	150	-	11	-	.2	-	2400
10	17	60	21.1	-	7.9	-	14	-	-	-	45	84	160	-	12	-	.2	-	-
10	18	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3000
10	24	60	20.4	8.5	7.8	-	-	-	-	-	57	81	164	-	10	-	.1	-	5700
10	31	60	21.1	-	7.6	-	12	-	-	-	60	83	186	-	11	-	.1	-	5700
11	7	60	14.9	-	7.6	-	8	-	-	-	50	75	182	-	7	-	.0	-	-
11	14	60	15.4	-	7.7	-	-	-	-	-	40	76	184	-	15	-	.2	-	6800
11	21	60	15.4	-	7.6	-	-	-	-	-	38	78	187	-	15	-	.2	-	1900
11	28	60	15.2	-	7.6	-	-	-	-	-	45	80	197	-	12	-	.1	-	5400
12	5	60	13.2	-	7.6	-	10	-	-	-	52	85	200	-	19	-	.1	-	4200
12	12	60	11.0	-	7.6	-	-	-	-	-	46	87	184	-	17	-	.2	-	7600
12	19	60	9.0	-	7.6	-	-	-	-	-	46	96	204	-	15	-	.2	-	3800
12	27	60	7.6	-	7.5	-	-	-	-	-	39	102	206	-	14	65	.2	-	2800
1	3	61	7.4	-	7.5	-	-	-	-	-	43	87	194	-	86	105	.3	-	8800
1	9	61	7.1	-	7.2	-	-	-	-	-	39	73	162	-	86	105	.3	-	9600
1	16	61	8.4	-	7.6	-	-	-	-	-	29	57	125	-	82	83	.1	-	10000
1	23	61	5.2	11.5	7.4	-	31	-	-	.9	21	68	124	-	326	-	.1	-	9600
1	30	61	1.9	13.1	7.5	-	10	-	-	.8	20	58	116	-	96	-	.2	-	2300
2	6	61	2.0	13.6	7.3	-	9	-	-	-	23	64	110	-	62	-	.1	-	720
2	14	61	4.0	12.5	7.5	2.7	15	-	-	.6	23	72	134	-	89	-	.4	-	16000
2	20	61	9.4	-	7.3	-	-	-	-	.6	19	65	112	-	185	-	.3	-	-
2	27	61	6.5	7.9	7.3	6.5	61	4.8	11.2	.6	25	64	121	-	440	-	.6	-	11000
3	6	61	8.6	9.7	7.3	1.6	12	2.0	4.8	.4	9	45	78	-	168	56	.4	-	8800
3	13	61	13.6	-	7.2	-	-	2.0	4.5	.4	9	57	87	-	131	59	.2	-	4200
3	20	61	12.8	9.9	7.4	2.2	15	1.6	4.4	.2	10	53	96	-	160	71	.3	-	3000
3	27	61	10.6	9.8	7.3	2.4	26	2.0	6.5	.3	12	56	105	-	165	55	.1	-	9000
4	3	61	13.7	-	7.3	-	16	-	-	-	10	60	115	-	97	75	.2	-	-
4	10	61	13.6	-	7.7	-	13	-	-	.2	10	48	105	-	240	68	.3	-	-
4	17	61	9.5	9.9	7.6	2.2	-	2.1	6.8	.4	11	64	114	-	150	75	.3	-	9400
4	24	61	13.0	9.3	7.3	2.2	11	1.9	4.2	.3	10	61	112	-	135	78	.2	-	6400
5	1	61	17.5	8.0	7.4	-	16	3.1	7.7	.2	10	62	116	-	230	45	.2	-	9600
5	8	61	16.9	-	7.3	-	-	2.4	6.2	.3	8	50	92	-	150	40	-	-	5400
5	15	61	18.8	-	7.2	-	-	2.4	6.0	.3	8	60	88	-	115	-	-	-	7300
5	22	61	19.5	-	7.2	-	9	1.4	4.3	.2	10	65	128	-	92	78	.2	-	6600
5	29	61	20.9	7.4	7.5	1.4	19	-	-	-	15	82	140	-	84	82	.2	-	-
6	5	61	22.7	6.3	7.3	2.0	8	2.0	4.8	.3	15	84	159	-	45	-	.1	-	-
6	6	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8800
6	12	61	25.2	5.0	7.4	2.0	8	2.4	4.8	.5	20	68	151	-	93	-	.2	-	11000

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Evansville, Indiana
Operated by U.S. Geological Survey

STATE Indiana

MAJOR BASIN Ohio River

MINOR BASIN Ohio River-Main Stem and Minor Trib.

STATION LOCATION Ohio River at Evansville, Indiana

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	18.000	26.000	30.000	75.000	55.000	421.000	240.000	378.000	72.000	50.000	88.200	26.000
2	18.000	26.000	30.000	85.500	55.000	448.000	228.000	376.000	72.000	50.000	85.500	26.000
3	18.000	26.000	30.000	98.300	55.000	465.000	228.000	377.000	72.000	50.000	90.200	26.000
4	18.000	26.000	30.000	105.000	55.000	492.000	244.000	368.000	72.000	50.000	101.000	26.000
5	18.000	26.000	30.000	116.000	55.000	513.000	270.000	362.000	79.700	50.000	119.000	26.000
6	16.000	30.000	25.000	121.000	50.000	536.000	295.000	364.000	83.300	60.000	120.000	27.000
7	16.000	30.000	25.000	115.000	50.000	562.000	300.000	380.000	93.800	60.000	128.000	27.000
8	16.000	30.000	25.000	70.000	50.000	585.000	285.000	429.000	115.000	60.000	134.000	27.000
9	16.000	30.000	25.000	70.000	50.000	594.000	258.000	494.000	130.000	60.000	135.000	27.000
10	16.000	30.000	25.000	70.000	50.000	601.000	234.000	566.000	138.000	60.000	118.000	27.000
11	15.000	55.000	35.000	65.000	82.400	593.000	221.000	609.000	150.000	35.000	70.000	22.000
12	15.000	55.000	35.000	65.000	98.800	580.000	222.000	626.000	173.000	35.000	70.000	22.000
13	15.000	55.000	35.000	65.000	112.000	563.000	238.000	626.000	198.000	35.000	70.000	22.000
14	15.000	55.000	35.000	65.000	116.000	545.000	254.000	598.000	215.000	35.000	70.000	22.000
15	15.000	55.000	35.000	65.000	124.000	526.000	274.000	555.000	230.000	35.000	70.000	22.000
16	14.000	40.000	35.000	70.000	123.000	504.000	298.000	499.000	248.000	70.000	96.300	16.000
17	14.000	40.000	35.000	105.000	128.000	482.000	317.000	443.000	269.000	87.500	103.000	16.000
18	14.000	40.000	35.000	129.000	143.000	446.000	338.000	383.000	286.000	107.000	50.000	16.000
19	14.000	40.000	35.000	151.000	168.000	409.000	363.000	334.000	297.000	120.000	50.000	16.000
20	14.000	40.000	35.000	177.000	188.000	385.000	382.000	296.000	293.000	127.000	50.000	16.000
21	22.000	26.000	35.000	188.000	194.000	368.000	390.000	247.000	280.000	130.000	40.000	18.000
22	22.000	26.000	35.000	183.000	195.000	360.000	392.000	209.000	255.000	131.000	40.000	18.000
23	22.000	26.000	35.000	167.000	208.000	360.000	384.000	181.000	214.000	132.000	40.000	18.000
24	22.000	26.000	35.000	146.000	238.000	354.000	375.000	159.000	165.000	143.000	40.000	18.000
25	22.000	26.000	35.000	120.000	266.000	342.000	368.000	143.000	118.000	149.000	40.000	18.000
26	19.000	24.000	55.000	60.000	303.000	333.000	360.000	127.000	87.400	139.000	40.000	15.000
27	19.000	24.000	55.000	60.000	345.000	326.000	360.000	117.000	60.000	119.000	40.000	15.000
28	19.000	24.000	55.000	60.000	388.000	315.000	369.000	101.000	60.000	96.200	40.000	15.000
29	19.000	24.000	55.000	60.000		302.000	377.000	88.600	60.000	82.900	40.000	15.000
30	19.000	24.000	55.000	60.000		281.000	380.000	80.000	60.000	72.900	40.000	15.000
31	19.000		55.000	60.000		254.000		75.000		76.900	40.000	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE KENTUCKY

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT

LOUISVILLE, KENTUCKY 84

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA			DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
6	14	61	7	17	1	0	1	0	0	0							
6	19	61	7	11	3	0	3	0	0	0							
6	26	61	7	26	2	0	2	2	1	3							
7	5	61	8	2	0	0	0	0	0	0							
7	12	61	8	4	0	0	0	0	1	1							
7	18	61	8	14	0	1	1	0	4	4							
7	25	61	8	24	0	0	0	15	6	21							
8	1	61	8	31	8	0	8	14	0	14							
8	8	61	9	1	1	1	2	8	5	13							
8	15	61	9	25	0	0	0	0	5	5							
8	21	61	9	27	1	0	1	0	4	4							
8	29	61	9	26	0	0	0	0	4	4							
9	5	61	10	28	0	0	0	1	12	13							
9	11	61	10	6	0	2	2	18	1	19							
9	19	61	10	18	0	0	0	2	10	12							
9	26	61	10	4	0	0	0	4	10	14							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE KENTUCKY

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT LOUISVILLE, KENTUCKY 84

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	PROTOZOA (No. per ml.)	MICROINVERTEBRATES				DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS															ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE							
6	16	61	1100			120		170		410	390	230	190	92	50	56	10	62	10	26	*	30							4--77
6	26	61	2700	20		350		190		1570	540	410	290	56	40	62	10	92	10	45	10	30							4-977
7	11	61	8600	20		470		360	200	7330	250	1300	130	56	60	45	20	89	10	58	*	10			44	48		5	-1977
8	1	61	2300		20	130		170		1570	370	480	410	56	40	45	20	92	10	62	10	30							4-977
8	10	61	900	20		250		60		500	100	210	80	56	50	26	10	82	10	58	10	30			16	1	2		----7
9	5	61	2500	60	80	770	90	370		390	350	80	100	89	50	56	30	26	00	92	00	10			53	32			11177
9	19	61	2400		390	710	90	370	40	230	80		20	56	60	89	20	58	*	26	*	10	20		26	27		4	161--

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE KENTUCKY

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT

LOUISVILLE, KENTUCKY 84

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
6	14	61	6	16	1510	315	123	192	16	26	49	13	6	29	1	12	8	1	11
7	1	61	7	18	1314	306	122	184	2	25	53	11	6	33	3	18	9	2	13
8	1	61	8	15	5040	191	77	114	2	18	23	3	2	17	1	10	8	2	14
9	5	61	9	15	1200	581	156	425	3	33	69	7	4	52	6	22	8	3	18

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE KENTUCKY

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT

LOUISVILLE, KENTUCKY 84

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
6	14	61	23.0	-	7.3	-	-	2.2	6.1	.9	21	90	124	0	150	82	.5	220	1900
6	19	61	19.5	-	7.6	-	-	2.0	2.4	.2	19	70	112	0	165	55	.7	178	14000
6	26	61	21.5	-	7.4	-	-	.8	5.7	.6	17	74	118	0	30	70	.5	139	9500
7	3	61	25.0	-	7.7	-	-	.7	1.4	.7	26	82	128	0	60	66	.1	200	-
7	10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	730
7	11	61	26.0	-	7.6	-	-	.8	5.6	.3	31	87	130	0	15	68	.1	133	-
7	18	61	25.0	3.4	7.5	-	-	1.7	6.7	.7	34	91	150	0	15	75	.1	262	1600
7	25	61	26.0	2.5	7.3	-	-	.8	1.9	1.1	37	67	128	0	83	70	.1	201	2400
8	1	61	27.0	3.8	7.6	-	-	1.6	8.6	.7	19	70	110	0	310	53	.6	154	4500
8	8	61	26.5	3.4	7.3	-	-	.8	5.7	.3	28	59	116	0	150	84	.3	107	4500
8	15	61	26.0	3.4	7.4	-	-	.8	4.7	.1	28	81	142	0	30	80	.2	245	820
8	21	61	26.0	3.7	7.4	-	-	.7	2.9	.2	25	70	128	0	40	80	.1	244	1100
8	29	61	26.5	5.9	7.8	-	-	.7	3.8	.1	30	90	142	0	30	89	.1	225	470
9	5	61	27.5	5.7	8.0	-	-	.7	5.7	.4	34	88	146	0	10	95	.1	252	590
9	11	61	29.0	6.8	7.8	-	-	1.5	7.7	.5	34	95	144	0	35	90	.1	217	-
9	12	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	590
9	19	61	25.5	3.4	7.7	-	-	.6	4.7	.4	35	88	148	0	6	105	.1	238	*100
9	26	61	25.0	4.1	7.5	-	-	3.6	3.8	.7	42	93	154	0	6	105	.1	275	1300

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Louisville, Kentucky
Operated by U.S. Geological Survey

STATE Kentucky

MAJOR BASIN Ohio River

MINOR BASIN Ohio River-Main Stem and Minor Trib.

STATION LOCATION Ohio River at Louisville, Kentucky

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	13.000	20.000	25.300	61.700	32.600	445.000	172.000	333.000	47.200	35.400	78.800	27.900
2	13.000	15.400	22.100	76.800	30.600	454.000	186.000	316.000	44.400	31.700	91.700	17.100
3	13.000	19.800	17.900	90.600	24.000	460.000	224.000	301.000	58.300	33.300	117.000	21.400
4	13.000	15.600	22.600	105.000	25.900	463.000	265.000	290.000	58.900	32.700	118.000	24.700
5	13.000	21.900	18.300	99.400	23.200	478.000	272.000	298.000	66.700	34.800	126.000	22.800
6	12.000	19.900	24.400	77.200	20.600	524.000	247.000	291.000	83.500	38.800	137.000	14.000
7	12.000	20.000	23.000	53.900	31.900	530.000	215.000	359.000	110.000	36.400	140.000	24.000
8	12.000	12.700	14.100	48.100	35.100	524.000	190.000	505.000	118.000	42.100	124.000	28.500
9	12.000	24.900	13.700	51.100	32.800	515.000	168.000	583.000	121.000	44.700	81.400	23.000
10	12.000	34.300	13.300	52.200	49.700	492.000	172.000	587.000	135.000	40.800	46.100	16.000
11	14.000	34.000	12.200	47.600	72.000	475.000	176.000	560.000	162.000	32.200	39.100	23.300
12	14.000	36.200	22.600	40.700	88.800	457.000	178.000	520.000	182.000	20.600	58.000	24.000
13	14.000	35.300	23.800	32.900	85.800	439.000	213.000	465.000	198.000	27.000	73.800	22.800
14	14.000	37.600	16.700	32.400	103.000	422.000	246.000	401.000	202.000	26.100	87.100	17.100
15	14.000	40.600	19.700	52.900	111.000	391.000	253.000	341.000	228.000	50.500	110.000	13.000
16	14.000	35.600	28.700	94.700	126.000	352.000	280.000	279.000	240.000	73.200	98.200	10.600
17	14.000	27.700	23.700	126.000	147.000	309.000	322.000	230.000	246.000	82.700	70.700	11.800
18	14.000	23.800	22.000	160.000	168.000	280.000	337.000	199.000	246.000	98.000	40.200	16.500
19	14.000	28.900	25.000	177.000	179.000	261.000	346.000	170.000	228.000	109.000	24.700	12.100
20	14.000	25.600	15.400	171.000	169.000	248.000	337.000	146.000	201.000	106.000	23.800	12.200
21	17.000	24.200	17.500	148.000	162.000	265.000	313.000	127.000	165.000	108.000	20.900	15.300
22	17.000	17.900	28.700	125.000	182.000	265.000	295.000	116.000	120.000	130.000	28.400	12.600
23	17.000	17.000	29.800	104.000	225.000	260.000	298.000	110.000	82.500	148.000	34.800	14.300
24	17.000	14.500	22.000	70.600	249.000	259.000	300.000	95.600	71.000	135.000	32.100	20.200
25	17.000	17.200	13.900	51.000	292.000	259.000	301.000	99.800	71.800	114.000	23.300	15.200
26	16.000	18.500	12.000	35.500	345.000	263.000	322.000	82.000	58.000	83.300	30.400	12.200
27	16.000	19.100	20.400	34.700	371.000	257.000	343.000	73.200	51.400	75.900	31.800	9.070
28	16.000	21.200	26.600	38.300	408.000	238.000	339.000	68.900	37.500	74.500	32.800	12.400
29	16.000	21.500	27.100	34.400		216.000	336.000	56.200	39.000	72.000	33.800	8.640
30	16.000	25.100	33.700	31.800		195.000	336.000	51.100	39.400	80.100	29.100	9.070
31	16.000		44.100	28.400		176.000		49.300		78.000	15.900	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE OHIO

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT

CINCINNATI, OHIO 37

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	26	60*	11	7	0	1	1	0	0	0								
11	30	60*	12	6	0	0	0	0	0	0								
12	21	60*	1	16	0	1	1	0	0	0								
2	1	61*	2	9	2	0	2	2	0	2								
3	1	61*	3	10	2	0	2	8	1	9								
3	29	61*	4	6	2	1	3	1	1	2								
4	26	61*	5	5	2	0	2	2	0	2								
5	31	61*	6	12	0	0	0	0	0	0								
6	28	61	7	17	2	0	2	0	0	0								
8	2	61*	8	25	3	1	4	4	13	17								
8	30	61*	9	14	1	1	2	7	9	16								
9	6	61	10	5	0	0	0	5	10	15								
9	13	61	10	10	0	1	1	0	16	16								
9	20	61	10	16	-	-	-	0	0	0								
9	27	61	10	6	-	-	-	0	11	11								

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE OHIO

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT

CINCINNATI, OHIO 37

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	5	60	2200	70	220	840	50	20	130	290	600	350	130	92	40	56	40	26	10	58	*	20	40		59	10			76-27
10	19	60	2600	180	160	970		160	200	350	570	290	130	58	30	56	30	57	10	26	10	20	200		58	12			74321
11	2	60	5600	20	20	970		110	350	1540	2620	1020	680	56	70	89	20	26	30	82	*	*	70		659	14			749-7
11	23	60	10300	180	200	1460		2270	120	2750	1280	750	180	56	50	89	20	82	10	26	10	20	150	20	148				48931
12	21	60	8700		400	2500		1270	140	1250	3150	1230	1520	91	40	82	30	89	10	56	10	20	50	10	75				71925
1	4	61	1600		20	160		70	20	940	430	380	220	56	40	58	20	89	10	62	*	20							---77
2	8	61	200							90	70	20	50	56	40	58	10	57	10	92	*	40							-----
2	21	61	1200		20	90				800	290	870	1180	56	50	58	10	26	10	89	10	30							----7
3	8	61	600							270	290	360	420	56	20	26	20	92	10	58	10	40					3		----7
3	22	61	400							160	180	70	510	26	10	82	10	70	10	74	10	60					2		-----
4	5	61	500					20		180	270	90	560	86	10	26	10	62	10	52	10	70	20						--7--
4	19	61	700							90	580	70	1100																-----
5	3	61	1900			20		40		440	1390	150	850	92	20	62	10	56	10	36	10	60							74-53
5	17	61	1400		20	60		80	20	410	810	210	310	92	20	56	10	62	10	36	10	60			3				3--77
6	7	61	8100	20	270	2260		480	20	3420	1680	1060	600	92	30	26	10	82	10	9	10	50			114	2	1		48977
6	20	61	400			40		20		50	340	110	690	92	20	45	20	56	20	62	10	30							-----
7	5	61	6100			420		180	90	4600	780	740	420	56	30	58	20	45	20	92	10	30	70		2		2		41977
7	19	61	3200			310		170		2090	600	850	520	56	30	92	10	62	10	26	10	50							749-7
8	9	61	2000		40	730		80		770	350	330	170	56	90	92	10	26	*	47	*	10			4			1	4-177
8	23	61	3200		40	560		150		1720	730	1430	170	56	70	89	20	58	10			10		20	60	5			479-7
9	6	61	3400		370	1100	20	290		1180	460	230	120	56	80	89	10	47	*	58	*		20		115	75			76-17
9	20	61	11300	40	4740	4250	90	660		640	170	150	210	56	50	89	30	92	*	26	*	10	40		176	73			1-124

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER

(Parts per billion)

STATE OHIO

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT

CINCINNATI, OHIO 37

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	5	60	10	19	2581	537	143	394	1	30	54	4	3	42	5	21	11	6	20
11	2	60	11	16	2880	338	171	167	3	34	79	6	14	51	8	19	14	5	17
12	7	60	12	21	3710	426	197	229	10	35	75	4	8	58	5	20	12	6	39
1	11	61	1	21	4003	316	109	207	3	19	49	3	5	37	4	12	7	2	17
2	8	61	2	15	4377	291	157	134	3	22	77	8	8	47	14	14	10	3	28
3	15	61	3	29	4856	240	72	168	2	15	25	2	3	17	3	9	6	1	14
4	5	61	4	19	4983	227	97	130	9	22	27	3	3	19	2	10	11	2	16
5	3	61	5	17	5580	156	42	114	0	8	16	2	2	12	0	6	3	1	8
6	7	61	6	20	6419	147	72	75	2	16	25	4	2	18	1	9	8	1	11
7	5	61	7	17	5012	187	98	89	5	19	36	3	3	25	5	14	10	2	12
8	9	61	8	21	5327	179	54	125	1	9	25	2	2	20	1	9	4	1	5
9	13	61	9	27	4430	287	144	143	3	32	53	2	4	44	3	19	9	6	22

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE OHIO

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT

CINCINNATI, OHIO 37

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	5	60	21.8	8.8	7.9	1.0	3	2.3	5.4	.0	34	38	152	5	3	140	.0	299	200
10	12	60	20.2	8.6	8.0	1.6	17	2.9	6.9	.1	38	45	175	5	9	135	-	333	340
10	19	60	20.2	8.7	7.6	1.9	35	2.9	6.9	.1	38	44	178	5	3	156	.0	360	3300
10	26	60	15.8	9.4	7.9	1.5	22	2.3	4.7	.1	41	40	175	10	3	148	.0	351	950
10	31	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	250
11	2	60	14.6	10.0	7.6	2.6	22	4.8	8.0	.2	43	36	181	5	6	152	.0	366	-
11	9	60	12.0	10.1	7.5	-	29	6.6	11.0	.3	63	43	203	5	20	146	.0	396	2800
11	16	60	12.1	9.8	7.2	2.3	32	7.8	12.5	.3	64	38	190	5	20	151	.0	418	850
11	23	60	11.0	11.1	7.4	2.0	26	1.1	13.9	.4	63	47	182	5	10	159	.0	384	830
11	30	60	9.2	11.4	7.4	2.2	22	.8	7.9	.4	52	46	185	5	10	153	.0	333	630
12	7	60	7.2	12.3	7.7	1.1	21	.6	8.9	.5	49	42	187	5	6	167	.0	380	670
12	14	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
12	15	60	3.9	8.5	7.7	1.7	7	.6	9.9	.5	55	40	180	5	10	144	.0	364	-
12	21	60	2.1	13.4	7.5	-	26	.6	10.7	.5	74	50	202	5	8	156	.0	389	720
12	27	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	830
12	28	60	1.3	13.8	7.5	-	23	.6	15.8	.6	59	53	183	5	20	85	.1	379	800
1	4	61	2.5	9.2	7.4	9.2	1054	1.2	14.9	1.4	49	45	143	5	360	98	.1	287	1100
1	11	61	2.5	12.5	7.3	1.4	42	.2	11.8	.9	31	37	118	5	130	99	.0	221	3100
1	18	61	3.8	10.1	7.1	1.2	53	.6	11.9	.8	32	32	124	10	500	88	.0	231	6500
1	25	61	.5	13.7	7.2	1.9	39	.6	7.8	.5	31	36	110	5	110	75	.0	248	2200
2	1	61	.2	13.6	7.3	1.2	12	.2	9.8	1.0	34	43	137	5	40	81	.2	237	120
2	8	61	.3	13.4	7.4	1.5	19	.4	9.6	.7	39	46	142	5	25	92	.2	264	770
2	15	61	4.0	10.8	7.2	3.0	47	.6	11.1	.6	28	39	100	5	130	66	.0	240	700
2	21	61	4.9	10.5	7.1	-	38	.8	-	.7	23	34	113	5	220	79	.1	224	6700
2	28	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11000
3	1	61	6.3	9.6	7.2	3.2	259	.9	9.9	.3	15	25	69	5	450	47	.1	138	-
3	8	61	7.6	9.9	7.3	.6	31	.9	6.8	.2	15	27	81	5	180	60	.0	147	960
3	15	61	8.2	10.2	7.2	1.1	25	1.1	6.9	.3	17	29	93	10	140	61	.0	181	18000
3	22	61	7.9	10.2	7.2	1.7	32	1.9	6.6	.3	17	30	102	10	150	72	.0	168	10000
3	29	61	9.0	10.1	7.2	1.5	29	1.9	5.7	.2	15	29	97	5	80	68	.1	182	1800
4	5	61	8.8	9.5	7.1	2.2	31	2.9	7.8	.2	15	26	83	8	320	69	.0	131	6100
4	12	61	8.5	10.2	7.3	1.5	18	.9	5.9	.2	15	33	110	3	70	77	.0	191	4200
4	19	61	8.3	10.1	7.3	1.3	13	2.7	7.6	.1	13	34	93	10	80	59	.0	156	20000
4	26	61	11.5	9.5	7.2	1.6	14	2.0	5.0	.1	15	36	98	10	100	65	.0	157	6000
5	3	61	12.5	8.6	7.2	1.7	29	1.9	6.0	.1	13	28	88	10	140	71	.0	124	4600
5	10	61	14.4	8.0	7.3	1.3	34	2.8	8.8	.1	13	29	76	10	260	46	.1	135	7200
5	17	61	17.3	7.5	7.1	1.6	26	2.5	6.9	.1	16	38	102	5	210	64	.0	204	3000
5	24	61	18.1	7.6	7.1	1.3	29	1.9	5.5	.2	19	43	126	5	55	98	.0	216	490
5	31	61	18.9	7.5	7.7	.8	20	1.7	6.1	.0	20	50	135	3	35	95	.1	213	83

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE OHIO
MAJOR BASIN OHIO RIVER
MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.
STATION LOCATION OHIO RIVER AT
CINCINNATI, OHIO 37

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
6	7	61	20.9	6.8	7.1	2.0	33	2.4	6.8	.1	25	36	141	3	120	109	.0	238	890
6	14	61	22.8	4.9	7.0	2.0	26	3.4	9.5	.0	17	36	99	7	190	90	.0	191	6200
6	20	61	21.3	6.4	7.0	-	62	2.5	8.7	.1	11	31	82	5	270	60	.0	154	26000
6	28	61	22.6	8.6	7.3	2.3	54	1.5	4.5	.0	17	39	103	5	68	65	.1	199	3400
7	5	61	24.8	7.6	7.5	2.3	8	2.5	7.9	.0	19	41	111	8	320	70	.0	203	-
7	12	61	25.6	8.3	7.6	1.6	23	1.4	4.9	.0	23	44	129	5	35	85	.0	226	-
7	19	61	25.0	5.1	7.1	1.6	33	1.9	8.9	.1	23	38	117	7	230	74	.1	212	1100
7	26	61	25.4	5.1	7.0	1.6	59	2.6	9.7	.0	15	34	92	10	450	68	.0	165	2000
8	2	61	27.9	5.6	7.2	1.1	32	1.4	5.5	.1	31	41	137	7	100	78	.1	257	3700
8	9	61	26.6	5.6	7.1	.9	26	1.8	5.8	.0	22	36	121	8	170	72	.1	239	650
8	16	61	26.6	5.3	7.5	1.3	51	3.4	6.8	.1	23	44	137	7	150	95	.0	273	1300
8	23	61	26.2	7.6	7.6	.8	15	1.9	4.9	.1	22	57	133	8	15	76	.0	241	200
8	30	61	27.0	7.7	7.6	1.0	20	2.6	6.5	.3	26	54	143	8	10	80	.0	229	200
9	6	61	29.2	8.1	8.4	1.6	13	1.6	3.9	.0	25	47	139	6	7	96	.2	249	-
9	13	61	29.4	6.6	8.2	1.3	13	1.6	8.6	.4	32	57	139	6	6	64	.2	277	440
9	20	61	25.3	9.0	9.1	1.9	13	1.8	5.8	.1	39	57	153	8	4	100	.0	322	-
9	27	61	24.5	8.7	8.3	1.5	10	1.5	4.7	.1	45	57	178	5	3	140	.0	351	11

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Cincinnati, Ohio
Operated by U.S. Geological Survey

STATE Ohio

MAJOR BASIN Ohio River

MINOR BASIN Ohio River-Main Stem & Minor Trib.

STATION LOCATION Ohio River at Cincinnati, Ohio

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	11.000	11.800	17.400	70.600	25.000	420.000	145.000	300.000	44.000	35.600	71.300	18.800
2	11.000	14.100	13.100	81.500	25.000	430.000	185.000	277.000	48.600	38.200	84.400	18.500
3	11.000	10.800	17.600	88.000	25.000	429.000	235.000	265.000	68.700	38.500	99.800	20.100
4	11.000	20.000	12.100	84.000	25.000	415.000	254.000	266.000	72.700	32.800	106.000	16.500
5	11.000	18.600	13.200	75.900	25.000	404.000	235.000	293.000	89.000	42.100	113.000	14.200
6	10.000	23.500	25.000	53.300	30.000	424.000	201.000	235.000	106.000	39.100	129.000	16.100
7	10.000	17.100	14.100	42.900	30.000	421.000	174.000	250.000	112.000	43.900	115.000	27.600
8	10.000	15.000	14.100	48.900	30.000	426.000	152.000	383.000	112.000	48.100	84.800	23.400
9	10.000	33.800	12.900	57.100	30.000	418.000	138.000	437.000	96.400	43.800	38.700	97.100
10	10.000	35.900	13.800	54.200	60.300	403.000	143.000	438.000	92.600	37.900	40.000	20.200
11	12.000	34.200	18.100	45.100	74.900	395.000	138.000	416.000	137.000	18.500	42.600	16.300
12	12.000	36.300	27.200	36.800	74.600	384.000	141.000	370.000	178.000	23.600	68.700	26.100
13	12.000	40.900	18.100	37.100	79.500	357.000	182.000	316.000	194.000	20.000	83.200	17.200
14	12.000	41.800	14.800	34.700	91.400	333.000	203.000	256.000	181.000	24.400	104.000	14.600
15	12.000	38.300	20.900	65.900	110.000	294.000	222.000	229.000	195.000	55.000	101.000	13.000
16	13.000	32.600	23.500	97.700	135.000	269.000	271.000	203.000	215.000	77.000	66.500	9.700
17	13.000	22.300	20.500	129.000	157.000	251.000	299.000	176.000	222.000	87.100	42.100	8.620
18	13.000	24.700	20.100	157.000	163.000	236.000	308.000	146.000	226.000	88.200	31.100	8.570
19	13.000	16.400	15.500	156.000	161.000	227.000	298.000	123.000	200.000	93.100	30.700	10.700
20	13.000	23.400	15.800	136.000	150.000	207.000	286.000	108.000	154.000	85.100	20.700	10.700
21	15.000	21.200	25.000	114.000	162.000	201.000	269.000	106.000	112.000	108.000	25.100	9.550
22	9.520	14.100	27.300	92.000	200.000	189.000	249.000	99.700	78.700	140.000	35.100	11.800
23	15.100	16.300	26.300	63.600	230.000	193.000	236.000	92.900	65.600	122.000	25.200	29.700
24	22.300	12.000	15.900	48.900	248.000	212.000	238.000	86.600	63.800	105.000	22.900	10.800
25	13.900	13.100	18.000	34.700	273.000	236.000	238.000	77.700	65.700	79.800	24.800	14.000
26	11.600	12.000	15.100	30.000	309.000	237.000	258.000	72.700	47.400	72.300	32.800	13.900
27	18.800	12.200	17.800	30.000	340.000	222.000	265.000	64.800	40.300	77.400	34.100	8.510
28	14.200	18.700	26.600	30.000	384.000	200.000	283.000	59.900	41.700	73.000	36.600	12.600
29	9.540	19.800	32.700	30.000		179.000	304.000	53.600	39.500	49.100	28.300	9.400
30	8.530	22.400	30.300	30.000		160.000	316.000	53.800	37.800	57.800	20.000	9.420
31	16.600		55.900	30.000		146.000		51.500		61.800	25.200	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE WEST VIRGINIA

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT

HUNTINGTON, WEST VIRGINIA 38

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	24	60*	11	14	0	0	0	0	0	0									
11	28	60*	12	5	0	1	1	0	0	0									
12	26	60*	1	6	0	1	1	0	0	0									
1	30	61*	2	9	1	1	2	0	0	0									
2	27	61*	3	8	4	0	4	7	0	7									
3	27	61*	4	6	3	0	3	1	0	1									
4	24	61*	5	4	1	1	2	0	0	0									
5	29	61*	6	6	2	1	3	0	0	0									
6	26	61*	7	13	0	0	0	0	0	0									
7	31	61*	8	11	1	0	1	0	2	2									
8	28	61*	9	13	0	1	1	3	8	11									
9	5	61	9	29	-	-	-	0	11	11									
9	11	61	10	12	0	0	0	1	18	19									
9	18	61	10	18	0	0	0	0	2	2									
9	25	61	10	2	-	-	-	0	0	0									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE WEST VIRGINIA
MAJOR BASIN OHIO RIVER
MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.
STATION LOCATION OHIO RIVER AT
HUNTINGTON, WEST VIRGINIA 38

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS														PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE							
10	3	60	3900	50	20	660		310	50	1890	960	910	130	56	60	58	20	89	10	27	10	10	40	10	101	3			74-37
10	17	60	2500	160	70	490		180	220	930	440	290	150	56	60	58	10	26	10	89	*	20	70		75	3			78--7
12	5	60	4300	50	350	1130		1720	200	600	380	1630	400	82	50	56	20	26	10	27	10	20	20		11	2			-1-74
12	19	60	1500		20	310		360	50	580	160	200	90	92	30	26	20	57	20	99	10	30	50	10	15				419-5
1	2	61	1900		90	50		140		920	690	1010	380	56	40	26	10	92	10	58	10	40		10	1				7-967
1	16	61	400			20				130	200	160	220	56	30	89	20	58	10	92	10	40	20			2	2		------
2	6	61	100							20		50	70	26	10	35	10	92	10	2	10	60							------
2	20	61	1800			70				1050	720	1720	1130	56	40	58	20	36	10	92	10	30							7--47
3	6	61	600			70		130		270	180	250	400	26	20	56	10	92	10	62	10	60	20				4		----7
3	20	61	300							90	180	90	490	26	10	74	10	82	10	27	10	70	20						------
4	3	61	1000			70		40		270	640	90	580										20						---63
5	1	61	2500		20	80		60	40	120	2190	150	790	92	30	62	20	36	10	56	*	40			7				7-74-
5	15	61	1300			80		100	20	370	730	60	290	9	10	92	10	56	10	2	10	70			2				3----
6	5	61	8200		310	1510		770	20	3890	1700	540	290	92	40	56	20	89	*	9	*	30			16	2	1		48977
6	19	61	2700		210	730		150	20	700	870	120	310	56	40	92	20	45	10	62	10	20				1			48977
7	3	61	4000		20	770		460		2360	410	910	290	82	50	27	10	57	10	56	10	30		10	105	6			749-7
7	17	61	4000		80	990		120	20	2090	700	440	120	56	40	89	30	92	10	82	10	20	20		78	16			74927
8	7	61	1900	40	20	850		40		640	350	210	210	56	70	26	10	82	*	62	*	20				2	3		48--7
8	21	61	2400		20	190		270		1680	210	250	60	57	30	56	20	89	10	58	10	30			547	8	2		74937
9	5	61	5900		120	350				3310	2150	330	60	89	40	56	10	58	10	57	10	40			27	42	2		4-977
9	18	61	1700	40	40	210				910	540	100	20	56	50	89	30	58	20	26	10	*	20		91	15			4--77

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE WEST VIRGINIA

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER—MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT HUNTINGTON, WEST VIRGINIA 38

DATE OF SAMPLE: BEGINNING MONTH	DAY	YEAR	END MONTH	DAY	GALLONS FILTERED	EXTRACTABLES: TOTAL	CHLORO-FORM	ALCOHOL	CHLOROFORM EXTRACTABLES: ETHER INSOLUBLES	WATER SOLUBLES	NEUTRALS: TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	1	60	10	17	3397	490	203	287	8	45	57	2	2	50	3	26	26	4	37
11	1	60	11	18	4155	448	184	264	5	52	70	2	5	58	5	15	15	5	22
12	2	60	12	22	3360	666	300	366	15	60	117	1	11	90	15	21	24	6	57
1	4	61	1	17	3510	362	134	228	4	27	58	4	5	45	4	13	11	3	18
2	1	61	2	20	4290	740	546	194	6	38	213	6	9	130	68	16	16	11	246
3	3	61	3	21	3705	326	107	219	5	21	39	3	3	30	3	11	11	1	19
4	4	61	4	25	3922	227	93	134	8	23	26	2	3	21	0	8	8	1	19
5	8	61	5	26	3375	261	88	173	3	21	31	5	3	22	1	10	7	1	15
6	12	61	6	27	3352	268	76	192	2	17	30	5	5	20	0	11	6	2	8
7	10	61	7	28	2647	475	202	273	8	45	71	7	4	56	4	26	24	4	24
8	7	61	8	22	3007	358	155	203	6	34	50	3	2	39	6	19	20	3	23
9	12	61	10	3	3390	379	129	250	4	27	57	2	5	46	4	14	12	3	12

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE WEST VIRGINIA

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT HUNTINGTON, WEST VIRGINIA 38

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	3	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	580
10	5	60	22.3	-	7.1	-	-	-	-	.5	36	27	178	5	8	178	-	380	-
10	10	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	570
10	12	60	20.2	-	7.1	-	-	-	-	.5	40	22	167	10	8	161	-	390	-
10	17	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360
10	19	60	18.3	-	7.4	-	-	-	-	.8	45	23	183	10	9	153	-	360	-
10	24	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	170
10	26	60	15.0	-	7.1	-	-	-	-	1.0	55	28	196	10	14	197	-	360	-
10	31	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	170
11	2	60	14.9	-	7.2	-	-	-	-	1.2	72	31	196	10	8	166	-	470	-
11	7	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180
11	9	60	12.3	-	7.1	-	-	-	-	.8	67	35	184	10	41	223	-	440	-
11	14	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	670
11	16	60	12.8	-	7.1	-	-	-	-	1.0	58	34	158	10	20	206	-	400	-
11	21	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2000
11	23	60	8.1	-	7.3	-	-	-	-	.6	50	30	172	5	10	216	-	380	-
11	28	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	650
11	30	60	8.9	-	7.2	-	-	-	-	.6	53	27	177	5	28	230	-	400	-
12	5	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	230
12	7	60	8.5	-	7.3	-	-	-	-	.7	75	35	202	15	11	197	-	480	-
12	12	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	130
12	14	60	3.3	-	6.9	-	-	-	-	.8	92	42	218	10	14	220	-	520	-
12	19	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	860
12	21	60	3.9	-	7.1	-	-	-	-	1.3	55	38	155	5	10	151	-	340	-
12	26	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	650
12	28	60	3.9	-	7.5	-	-	-	-	1.0	62	36	170	10	12	173	-	360	-
1	2	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1300
1	4	61	2.9	-	7.1	-	-	-	-	.8	36	28	120	30	100	130	-	260	-
1	11	61	2.3	-	7.1	-	-	-	-	1.0	39	27	134	15	33	178	-	460	-
1	16	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3500
1	18	61	5.4	-	7.1	-	-	-	-	.6	30	33	116	35	215	120	-	280	-
1	23	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
1	25	61	2.1	-	7.0	-	-	-	-	.5	39	36	126	10	29	108	-	260	-
1	30	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*10
2	1	61	2.4	-	7.1	-	-	-	-	.7	41	37	140	10	16	134	-	290	-
2	6	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150
2	8	61	2.4	-	7.0	-	-	-	-	.7	48	39	138	10	14	98	-	240	-
2	13	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	440
2	15	61	3.2	-	6.9	-	-	-	-	.6	29	32	114	30	150	82	-	200	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE WEST VIRGINIA

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT

HUNTINGTON, WEST VIRGINIA 38

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
2	20	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3500
2	22	61	6.1	-	6.9	-	-	-	-	.8	20	32	112	15	400	91	-	240	-
2	27	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3700
3	1	61	5.8	-	6.9	-	-	-	-	.2	12	21	62	30	280	53	-	140	-
3	6	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5900
3	8	61	10.3	-	6.7	-	-	-	-	.2	9	22	80	15	240	72	-	140	-
3	13	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4400
3	15	61	7.6	-	6.9	-	-	-	-	.6	16	21	78	10	120	82	-	170	-
3	20	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3700
3	22	61	8.1	-	6.9	-	-	-	-	.3	17	29	92	10	130	82	-	200	-
3	27	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5100
3	29	61	9.6	-	7.0	-	-	-	-	.3	16	27	105	5	120	77	-	220	-
4	3	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17000
4	5	61	9.3	-	7.1	-	-	-	-	.4	16	30	100	5	150	62	-	180	-
4	10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4200
4	12	61	9.2	-	7.1	-	-	-	-	.4	18	28	95	5	70	72	-	220	-
4	17	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2500
4	19	61	8.9	-	7.0	-	-	-	-	.5	13	25	81	5	150	79	-	160	-
4	24	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4600
4	26	61	13.0	-	7.2	-	-	-	-	.4	13	25	84	10	120	102	-	200	-
5	1	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4700
5	3	61	13.1	-	6.9	-	-	-	-	.5	13	24	69	25	145	67	-	120	-
5	8	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8000
5	10	61	14.4	-	7.2	-	-	-	-	.3	11	26	79	35	185	67	-	160	-
5	15	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1400
5	17	61	16.8	-	7.2	-	-	-	-	.5	7	33	86	15	97	77	-	180	-
5	22	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2600
5	24	61	18.3	-	7.2	-	-	-	-	1.2	22	30	122	5	39	101	-	260	-
5	29	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
5	31	61	17.8	-	7.1	-	-	-	-	.5	23	31	100	5	27	124	-	280	-
6	6	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1400
6	7	61	20.3	-	7.1	-	-	-	-	.2	23	39	150	10	130	138	-	280	-
6	12	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3000
6	14	61	22.5	-	7.1	-	-	-	-	.2	12	28	99	30	185	111	-	240	-
6	19	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3300
6	21	61	21.5	-	7.6	-	-	-	-	.3	19	25	88	10	45	240	-	200	-
6	26	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11000
6	28	61	21.3	-	7.1	-	-	-	-	.2	23	36	108	15	31	82	-	220	-
7	3	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	270

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE WEST VIRGINIA

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT
HUNTINGTON, WEST VIRGINIA 38

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
7	5	61	23.8	-	7.1	-	-	-	-	.3	27	36	118	10	28	115	-	260	-
7	10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55
7	12	61	23.9	-	7.2	-	-	-	-	.2	27	29	132	10	20	110	-	220	-
7	17	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	550
7	19	61	24.4	-	7.1	-	-	-	-	.6	48	38	132	10	80	106	-	300	-
7	24	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1600
7	26	61	25.5	-	7.1	-	-	-	-	.4	28	35	116	30	140	101	-	260	-
7	31	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	870
8	2	61	27.2	-	7.1	-	-	-	-	.3	30	30	148	10	75	173	-	280	-
8	7	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1100
8	9	61	25.7	-	7.1	-	-	-	-	.3	22	26	136	10	65	125	-	240	-
8	14	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2000
8	16	61	23.7	-	7.1	-	-	-	-	.4	27	34	110	10	50	139	-	260	-
8	21	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	760
8	23	61	25.2	-	7.1	-	-	-	-	.2	28	33	114	10	17	148	-	260	-
8	28	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	450
8	30	61	27.2	-	6.9	-	-	-	-	.6	39	34	110	5	16	106	-	240	-
9	4	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	190
9	6	61	27.3	6.0	7.3	-	-	-	-	.5	32	37	124	10	12	158	-	260	-
9	13	61	29.2	4.0	7.3	-	-	-	-	.4	45	39	160	10	10	154	-	320	-
9	20	61	24.7	5.5	7.2	-	-	-	-	.6	49	-	150	10	4	125	-	300	-
9	27	61	22.3	5.0	7.5	-	-	-	-	1.0	65	41	148	10	6	125	-	420	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Huntington, West Virginia
Operated by U.S. Geological Survey

STATE	West Virginia
MAJOR BASIN	Ohio River
MINOR BASIN	Ohio River-Main Stem & Minor Trib.
STATION LOCATION	Ohio River at Huntington, West Virginia

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	8.230	15.700	10.400	80.900	18.300	333.000	127.000	214.000	43.000	25.300	52.300	15.600
2	11.000	14.200	12.100	77.600	14.500	322.000	136.000	220.000	50.000	39.900	70.100	19.100
3	8.940	18.000	13.700	65.500	14.900	301.000	175.000	221.000	79.000	29.200	82.000	14.400
4	9.020	17.600	12.100	55.300	21.000	276.000	162.000	188.000	105.000	27.800	111.000	9.790
5	8.940	19.700	13.000	39.600	21.200	263.000	138.000	163.000	101.000	32.400	107.000	12.400
6	7.010	17.300	14.800	35.600	18.000	276.000	129.000	157.000	95.800	36.000	76.800	14.800
7	7.150	20.000	11.800	30.700	20.600	295.000	119.000	165.000	85.300	44.700	45.100	24.800
8	8.390	25.000	9.900	39.800	32.100	292.000	107.000	205.000	56.000	37.700	28.500	17.000
9	7.310	38.500	10.100	46.600	27.300	295.000	102.000	225.000	85.600	35.500	35.500	15.900
10	10.200	34.400	9.320	36.300	22.100	296.000	98.100	226.000	124.000	27.000	29.200	14.500
11	10.600	33.000	14.600	29.400	42.900	292.000	109.000	204.000	157.000	18.700	33.100	21.200
12	9.220	32.400	22.400	28.600	53.300	269.000	137.000	185.000	153.000	22.100	65.900	15.800
13	9.400	44.700	15.300	28.600	70.000	244.000	147.000	166.000	131.000	18.400	79.500	12.200
14	9.510	33.800	12.300	28.800	96.200	221.000	181.000	164.000	126.000	28.400	73.900	13.200
15	10.200	33.500	14.000	51.200	134.000	211.000	205.000	152.000	135.000	46.600	38.600	14.700
16	10.300	27.600	17.400	94.900	147.000	196.000	217.000	120.000	150.000	70.600	33.100	12.400
17	9.220	21.400	15.500	106.000	139.000	190.000	227.000	98.000	150.000	52.700	45.500	10.100
18	7.310	14.500	13.700	96.300	129.000	183.000	226.000	88.000	130.000	63.600	25.400	10.100
19	10.800	22.300	12.500	84.100	127.000	164.000	210.000	83.000	85.700	52.400	17.000	11.100
20	18.200	21.200	13.400	72.400	172.000	140.000	197.000	88.000	45.000	122.000	17.600	11.300
21	11.200	10.200	23.800	49.800	206.000	126.000	187.000	81.000	45.000	114.000	20.100	15.900
22	9.320	15.700	25.700	41.700	214.000	141.000	191.000	75.000	48.500	76.000	23.800	23.100
23	11.500	13.100	15.300	36.100	214.000	175.000	194.000	68.000	51.800	62.700	18.700	13.000
24	20.100	11.200	12.300	21.600	213.000	190.000	196.000	66.000	51.000	40.400	16.000	12.900
25	12.200	15.100	11.700	22.100	227.000	183.000	195.000	65.000	48.000	62.900	20.100	14.500
26	11.200	12.200	15.200	26.200	259.000	166.000	196.000	50.000	34.100	60.100	19.500	16.000
27	22.900	12.300	17.000	26.300	301.000	147.000	238.000	53.000	41.200	61.000	31.700	17.000
28	8.140	11.200	18.600	25.800	323.000	130.000	258.000	47.000	30.000	36.600	26.600	12.000
29	10.900	16.500	28.500	25.400		119.000	256.000	50.000	34.400	40.000	19.300	15.400
30	10.000	13.000	40.800	23.300		111.000	239.000	51.000	35.900	40.700	23.100	10.800
31	13.600		69.600	19.700		110.000		38.000		37.700	16.800	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE OHIO

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT EAST LIVERPOOL, OHIO 39

DATE SAMPLE TAKEN			DATE OF DETERMINATION		RADIOACTIVITY IN WATER							RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
					ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	13	60*	10	21	0	0	0	0	0	0									
11	7	60	12	20	0	1	1	0	0	0									
11	28	60*	12	5	-	-	-	0	0	0									
12	19	60	1	19	-	-	-	0	3	3									
1	10	61	2	2	0	1	1	0	0	0									
1	23	61*	3	2	-	-	-	0	0	0									
2	15	61	3	22	0	0	0	0	0	0									
2	28	61	3	22	-	-	-	0	0	0									
3	14	61*	3	27	1	0	1	0	3	3									
3	28	61*	4	11	-	-	-	0	0	0									
4	12	61*	5	2	1	0	1	0	0	0									
4	25	61*	5	22	-	-	-	0	0	0									
5	9	61*	5	24	0	0	0	0	8	8									
5	22	61*	6	23	-	-	-	0	0	0									
6	12	61*	6	28	1	0	1	0	0	0									
6	27	61*	7	31	-	-	-	0	0	0									
7	10	61*	7	26	0	0	0	0	0	0									
8	1	61*	8	31	-	-	-	0	1	1									
8	17	61*	9	12	0	0	0	3	1	4									
9	1	61	9	28	-	-	-	0	0	0									
9	18	61	10	16	-	-	-	1	7	8									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE OHIO

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT

EAST LIVERPOOL, OHIO

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS														PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE							
10	4	60	1900	130		850		460	350	50	50	40	20	26	30	56	20	70	10	62	10	30	20	10	7				---31
11	2	60	300		20	110		90	70	20		40	20	26	20	62	10	82	10	36	10	60							-----
11	7	60	6200			20		6140			20	50		26	20	27	10	36	10	56	10	60			13	5	1		---3-
11	18	60	2200					2120		20	20		70	26	10	62	10	36	10	76	10	60			1				---3-
12	1	60	400			20		290	50					26	30	92	10	82	10	65	10	50		10	1				-1---
12	19	60	100					140					50																-----
1	9	61									50		20																-----
2	15	61									20		70	92	10	26	10	36	10	50	10	70					1		-----
2	28	61	800	20		20				110	630	180	1250	62	20	92	10	36	10	16	*	70							-----
3	14	61	200					20		90	90	50	250										20						-----
3	30	61	200							50	160	20	50	82	20	9	10	2	10	62	10	60		10					-----
4	12	61	4400			40		240	70	400	3690	20	440	94	40	9	10	35	10	82	10	40	20			2			35973
4	25	61	1600			60		100	40	330	1100	100	290	9	20	82	10	93	10	2	10	60							3-963
5	15	61	600			40		20		130	400	70	200	92	20	9	10	56	10	45	10	50			3				3----
6	1	61	2000	20		120		1490		20	370	20	60	92	60	26	*	65	*	66	*	30			6	1	2		-1-7-
6	23	61	1300		20	670		310	40	160	110	110	160	62	10	92	10	56	10	36	*	70			6				58---
6	27	61	6200	20	970	2900		1590		440	270	80	80	26	40	92	10	56	10	27	10	40				2			48-32
7	17	61	5600	20	2690	1800		460		210	370		80	56	30	26	20	92	10	62	*	50			53	9			48923
8	9	61	2900		60	460		2240		100	40	20		56	40	26	10	92	10	57	10	40	170		6	5			---3-
8	18	61	300			250					20		20	27	30	70	10	26	10	92	10	50	20		2	5			-----
9	1	61	3900		210	1320	20	460		620	1240	20	60	56	70	26	10	58	10	70	*	10	40		117	26			42164
9	18	61	2300		40	1100	20	350	40	290	410	40	20	56	70	26	10	70	10	58	*	10	60		168	18			48-35

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE OHIO

MAJOR BASIN OHIO RIVER

MINOR BASIN OHIO RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION OHIO RIVER AT EAST LIVERPOOL, OHIO 39

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	25	60	11	30	2500	939	379	560	8	72	223	78	40	85	20	42	23	8	3
12	13	60	1	17	4000	344	118	226	3	15	64	26	12	23	3	15	5	1	15
2	1	61	3	6	1416	1156	766	390	8	31	559	274	129	151	5	84	8	8	68

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Sewickley, Pennsylvania
Operated by U.S. Geological Survey

STATE Ohio

MAJOR BASIN Ohio River

MINOR BASIN Ohio River-Main Stem & Minor Trib.

STATION LOCATION Ohio River at East Liverpool, Ohio

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	5.460	6.160	5.680	22.000	7.010	142.000	47.000	95.000	19.600	15.800	12.300	6.490
2	5.080	7.360	6.080	20.400	8.210	135.000	61.500	83.500	26.000	10.800	14.900	6.830
3	4.650	8.400	6.240	18.900	8.210	127.000	55.200	68.000	41.100	10.700	29.600	7.010
4	4.720	8.120	5.530	17.200	7.100	127.000	52.000	59.400	53.100	15.300	42.000	5.830
5	5.080	7.830	4.800	15.800	6.650	125.000	47.000	49.000	47.000	12.600	36.400	6.740
6	5.680	6.920	4.580	14.100	6.080	130.000	42.000	39.200	38.200	14.200	26.000	10.000
7	5.160	6.830	5.600	15.500	6.920	120.000	45.000	40.200	31.000	25.200	20.400	9.500
8	5.160	10.200	5.680	15.300	7.540	125.000	52.000	52.000	28.500	19.600	15.800	8.310
9	4.720	12.800	5.680	16.000	7.360	122.000	46.000	72.400	28.500	13.200	12.200	7.360
10	4.370	12.100	5.680	16.200	6.920	125.000	43.000	65.800	46.200	9.500	9.610	7.100
11	4.650	14.400	5.300	14.800	8.310	122.000	57.300	59.400	65.800	8.310	9.830	5.530
12	4.870	17.600	4.300	15.300	8.400	117.000	68.000	59.400	70.200	8.210	17.200	5.530
13	4.800	18.300	3.960	14.800	9.000	104.000	79.000	55.200	65.800	8.310	29.400	5.910
14	4.510	15.500	4.560	14.500	18.900	81.200	88.100	43.000	61.500	9.720	20.400	5.830
15	4.440	13.900	5.230	14.900	49.200	83.500	92.700	31.900	65.800	12.800	20.400	5.680
16	4.300	12.400	5.350	15.100	48.000	88.100	95.000	33.700	59.400	11.100	18.600	5.530
17	3.560	10.500	5.990	24.400	37.300	79.000	97.300	37.300	48.000	8.400	13.200	5.160
18	3.490	8.900	5.760	25.200	65.000	68.000	97.300	37.300	31.900	12.700	8.500	4.720
19	5.040	8.210	5.230	24.400	102.000	55.200	99.700	38.200	23.600	15.500	7.540	4.300
20	5.230	7.360	5.760	22.000	142.000	59.400	92.700	38.200	21.200	18.400	7.270	5.980
21	5.230	6.570	6.490	18.900	123.000	68.000	81.200	36.400	18.900	16.800	9.400	8.020
22	6.080	6.320	6.320	13.700	112.000	76.800	74.600	32.800	20.400	17.700	9.940	7.540
23	5.910	7.830	5.760	10.800	114.000	83.500	85.800	32.800	20.400	15.100	7.830	6.160
24	4.800	7.180	6.240	9.400	137.000	70.200	83.500	31.900	18.900	13.900	7.180	5.760
25	4.720	5.990	5.460	9.100	137.000	68.000	88.100	27.600	14.600	19.600	8.400	4.870
26	4.870	5.990	5.010	8.210	156.000	57.300	155.000	26.000	13.500	19.600	7.920	4.940
27	5.530	5.460	5.830	8.310	164.000	50.000	159.000	24.400	13.700	17.700	7.640	5.080
28	5.760	4.510	9.360	7.450	146.000	45.000	130.000	25.200	12.800	14.800	6.650	5.010
29	6.160	4.650	11.600	6.240		46.000	122.000	22.000	10.800	17.100	6.740	5.160
30	5.760	5.680	15.200	6.160		50.000	114.000	22.000	11.100	12.600	7.010	5.010
31	5.230		23.600	5.910		45.000		17.800		11.800	6.650	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE LOUISIANA

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN OUACHITA RIVER

STATION LOCATION OUACHITA RIVER AT

BASTROP, LOUISIANA 85

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
8	14	61	9	12	0	2	2	0	12	12								
8	22	61	9	22	0	0	0	15	16	31								
8	29	61	9	27	0	0	0	0	6	6								

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE LOUISIANA

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN OUACHITA RIVER

STATION LOCATION OUACHITA RIVER AT BASTROP, LOUISIANA

85

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	PROTOZOA (No. per ml.)	MICROINVERTEBRATES				DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE			ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
8	22	61	900			130		40	40	540	170	80	80	58	40	56	30	88	10	57	10	20			77	4			4---7
9	5	61	400			60		80		270	20	40		57	30	58	20	56	10	53	10	40			24				-----

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE LOUISIANA

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN OUACHITA RIVER

STATION LOCATION OUACHITA RIVER AT

BASTROP, LOUISIANA 85

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
8	14	61	30.0	6.0	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	22	61	29.0	6.1	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	29	61	29.0	6.8	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	5	61	29.0	6.4	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	12	61	-	-	7.0	-	-	-	-	-	-	-	68	15	-	15	.1	249	-
9	18	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10000

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station near Arkansas-Louisiana State Line
Operated by U.S. Geological Survey

STATE: Louisiana

MAJOR BASIN: Southwest-Lower Mississippi River

MINOR BASIN: Ouachita River

STATION LOCATION: Ouachita River at Bastrop, Louisiana

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	5.000	2.790	2.640	14.300	5.610					2.620	5.270	4.430
2	4.000	2.360	3.000	16.000	5.110					2.660	5.300	4.550
3	3.500	2.070	3.500		5.340					2.690	5.680	4.790
4	3.000	2.150	4.000		5.060					2.570	4.040	4.910
5	3.000	2.350	5.000		5.010					2.500	4.390	4.960
6	2.910	2.560	5.700		5.180				5.000	1.940	4.870	3.930
7	2.980	2.740	6.130		4.700				4.650	2.000	5.290	3.240
8	3.420	2.760	10.300		5.370				4.330	1.600	5.400	3.090
9	4.350	2.620	14.200		5.700				3.750	1.590	5.920	3.120
10	5.330	2.380	15.600		6.730				4.490	1.710	6.000	3.270
11	5.400	2.580	16.800		7.910				4.140	1.870	4.520	3.470
12	4.720	3.740	17.700		8.150				4.340	2.150	4.170	3.680
13	3.650	5.260	18.000		8.130				4.630	2.280	4.480	4.010
14	3.240	4.640			7.800				4.800	2.780	5.780	4.940
15	3.150	4.840		11.700	6.490				5.420	4.320	5.960	5.800
16	3.240	5.360		10.800	5.740				4.380	9.030	4.250	6.600
17	3.280	4.210		10.000	5.760				4.390	15.900	3.610	7.570
18	3.330	4.830		9.850	7.080				4.570		3.730	7.200
19	3.270	5.070		10.000	11.600				3.420		4.030	6.020
20	2.990	6.730		10.200	15.300				4.600		4.210	4.620
21	3.050	6.750		10.300					6.660		5.000	3.330
22	3.090	6.600		10.200					4.190		6.130	3.140
23	3.120	5.290		8.940					1.660		5.320	3.150
24	3.130	4.660		8.560					2.190		4.050	3.280
25	3.160	4.500		7.870					2.550		3.870	3.430
26	2.950	4.350		7.170					2.760		3.970	3.550
27	2.640	4.250	12.200	7.140					3.270	12.300	4.980	3.170
28	2.520	4.040	10.800	7.060					2.850	9.740	6.020	3.060
29	2.630	3.470	10.300	6.650					2.650	7.300	5.790	3.000
30	2.830	2.930	11.500	6.620					2.640	6.540	4.930	3.000
31	2.910		12.700	6.570						5.860	4.560	

DATA NOT AVAILABLE

No discharge measurements were made for part of the year because of high flows that could not be measured accurately. No records are available for these periods.

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE NEBRASKA
MAJOR BASIN MISSOURI RIVER
MINOR BASIN LOWER MISSOURI BELOW NIOBRARA RIVER
STATION LOCATION PLATTE RIVER ABOVE
PLATTSMOUTH, NEBRASKA 86

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
8	2	61	9	7	7	3	10	24	17	41									
8	8	61	9	19	3	3	6	13	18	31									
8	15	61	9	25	7	1	8	7	0	7									
8	22	61	9	26	11	1	12	44	5	49									
8	29	61	9	28	4	4	8	1	11	12									
9	5	61	9	29	1	1	2	7	3	10									
9	12	61	11	8	76	0	76	324	1	325									
9	19	61	10	5	1	4	5	17	19	36									
9	26	61	10	11	5	2	7	65	39	104									

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE NEBRASKA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN LOWER MISSOURI BELOW NIOBRARA RIVER

STATION LOCATION PLATTE RIVER ABOVE PLATTSMOUTH, NEBRASKA 86

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
8	2	61	26700		150	4000		460	20	10430	11700	2300	3810	46	50	78	10	55	*	92	*	40				1			487-3
8	21	61	15300	90	20	2230		960	20	8510	3420	2680	1900	46	50	74	10	55	*	78	*	40							4876-
9	5	61	40700	270	210	10330		730		17990	11180	2840	2690	46	60	82	10	26	10	48	*	30			9		1		48963
9	19	61	36300	40	60	13580		990		14970	6690	3080	4040	46	40	78	10	71	10	82	10	50	40						48965

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NEBRASKA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN LOWER MISSOURI BELOW NIOBRARA RIVER

STATION LOCATION PLATTE RIVER ABOVE PLATTSMOUTH, NEBRASKA 86

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
8	2	61	23.0	-	8.5	5.4	54	-	-	1.2	172	168	156	-	700	48	1.1	468	-
8	8	61	24.6	-	8.3	6.6	46	-	-	.3	124	174	146	-	420	40	.8	274	-
8	29	61	27.0	8.9	8.2	6.8	32	-	-	.4	120	160	160	-	280	66	1.1	406	-
9	5	61	28.0	12.1	8.7	6.2	45	-	-	.2	135	176	160	-	160	46	1.1	420	-
9	28	61	-	-	-	-	22	-	-	.2	89	144	148	-	180	24	1.1	432	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Louisville, Nebraska
Operated by U.S. Geological Survey

STATE Nebraska

MAJOR BASIN Missouri River

MINOR BASIN Lower Missouri-Niobrara River

STATION LOCATION Platte River above Plattsmouth, Nebraska

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	3.160	3.850	2.720	3.850	3.260	8.640	5.830	4.870	10.700	3.900	2.480	1.770
2	3.070	3.920	3.620	3.770	2.840	9.930	5.460	4.390	15.800	3.550	2.960	1.580
3	3.200	4.330	2.690	3.510	2.540	8.690	5.600	4.310	12.900	3.250	3.290	1.600
4	2.880	4.370	2.780	3.330	2.490	7.500	5.180	4.560	9.140	3.140	3.320	1.770
5	2.880	4.040	2.840	3.370	2.540	7.030	5.000	5.600	7.980	2.420	3.030	1.480
6	2.720	3.810	4.770	3.810	2.690	7.440	5.140	6.120	6.920	2.860	2.260	1.150
7	2.600	3.730	6.350	4.160	2.840	7.820	4.870	6.520	7.980	2.720	1.790	1.360
8	2.400	3.810	6.150	4.290	3.030	8.140	5.790	6.670	7.340	2.550	1.630	1.460
9	2.690	3.690	4.860	4.290	3.230	6.770	5.880	6.720	6.920	2.930	1.560	1.580
10	2.750	4.120	4.120	4.250	3.470	6.420	5.370	6.470	6.820	2.260	1.600	1.740
11	2.840	3.650	3.580	4.250	3.770	7.440	6.320	6.520	6.220	2.050	1.430	2.360
12	2.630	3.920	3.260	4.120	4.080	7.870	8.910	6.270	5.690	2.230	2.020	3.710
13	2.940	4.040	3.230	4.040	4.500	8.360	8.520	5.790	4.870	2.300	1.990	4.650
14	3.130	3.810	3.510	3.810	5.040	8.250	8.470	5.510	5.050	2.790	1.560	3.860
15	3.400	3.650	3.810	3.690	5.400	8.580	8.470	5.510	10.200	2.480	1.850	3.290
16	3.200	3.440	4.040	4.000	5.750	12.600	7.870	6.670	11.800	2.330	1.560	2.450
17	3.160	3.620	4.120	4.370	5.650	10.600	7.180	7.390	13.300	2.300	1.290	2.690
18	3.330	3.620	4.160	4.500	5.180	10.300	6.170	7.500	9.360	2.170	1.260	2.550
19	3.400	3.850	3.510	4.430	5.040	9.820	5.980	7.080	9.080	1.790	1.630	2.330
20	3.440	4.000	2.130	4.160	5.180	8.970	5.510	6.420	7.980	1.690	1.820	2.230
21	3.300	4.000	1.450	3.880	5.400	8.360	5.600	6.670	7.440	1.430	2.590	2.450
22	3.550	3.880	1.040	3.160	5.900	8.300	5.280	6.320	7.660	1.480	3.740	2.650
23	3.770	3.810	1.050	2.400	6.500	9.020	5.000	6.670	7.600	1.430	3.740	3.480
24	4.250	4.000	1.650	1.650	7.320	8.580	5.280	11.400	7.340	1.240	3.360	3.250
25	3.810	4.040	3.330	1.410	8.120	7.980	5.100	12.600	6.980	1.030	2.650	3.550
26	3.770	4.120	3.160	1.450	10.000	7.500	5.100	11.000	6.720	1.030	2.390	3.550
27	3.770	4.950	2.130	1.610	11.000	7.710	4.920	9.870	5.830	1.200	2.720	2.750
28	3.650	5.260	2.210	1.880	8.690	8.580	4.920	8.250	5.140	1.600	2.720	2.860
29	3.880	5.220	2.400	2.320		7.340	4.610	7.180	5.230	2.590	2.360	3.290
30	3.920	2.750	3.300	2.840		6.820	4.690	6.670	4.310	3.000	1.710	3.710
31	3.770		3.770	3.200		6.420		6.420		2.720	1.660	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE MARYLAND

MAJOR BASIN NORTH ATLANTIC

MINOR BASIN POTOMAC RIVER

STATION LOCATION POTOMAC RIVER AT

GREAT FALLS, MARYLAND 40

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	24	60*	11	3	0	4	4	0	0	0									
11	28	60*	12	5	0	0	0	0	1	1									
12	26	60*	1	12	0	1	1	0	1	1									
1	30	61*	2	10	0	0	0	0	0	0									
2	27	61*	3	10	4	0	4	0	0	0									
3	27	61*	4	10	1	0	1	4	4	8									
4	24	61*	5	12	1	0	1	0	0	0									
5	29	61*	6	12	0	1	1	0	0	0									
6	26	61*	7	17	0	0	0	0	0	0									
7	30	61*	8	11	0	1	1	0	0	0									
8	28	61*	9	13	0	2	2	5	2	7									
9	5	61	9	28	-	-	-	0	0	0									
9	11	61	10	3	-	-	-	3	0	3									
9	18	61	10	13	-	-	-	4	11	15									
9	25	61	10	5	-	-	-	2	4	6									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE MARYLAND
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN POTOMAC RIVER
STATION LOCATION POTOMAC RIVER AT GREAT FALLS, MARYLAND 40

DATE OF SAMPLE: MONTH	DAY	YEAR	ALGAE (Number per ml.): TOTAL	BLUE-GREEN: COCCOID	BLUE-GREEN: FILAMENTOUS	GREEN: COCCOID	GREEN: FILAMENTOUS	FLAGELLATES (Pigmented): GREEN	FLAGELLATES (Pigmented): OTHER	DIATOMS: CENTRIC	DIATOMS: PENNATE	INERT DIATOM SHELLS (No. per ml.): CENTRIC	INERT DIATOM SHELLS: PENNATE	DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*): FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE	OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES: PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	DOMINANT GENERA (See Introduction for Identification)
10	3	60	1800	180		290		20	20	1170	130	290	130	26	30	82	20	28	10	53	10	30	70						4-9--
10	17	60	15900	110		270		20	50	15360	50	990	130	82	50	23	30	27	*	2	*	20	110		1				4-9--
11	7	60	600			130		90		270	110	70	20	82	30	26	10	27	10	23	10	40	50		1				--9--
11	21	60	700					130	20	330	200	20	40	36	30	82	20	26	10	70	10	40	20						-49--
12	5	60	400					90		130	200		130	65	20	36	20	82	10	70	10	50							------
12	19	60	100							20	70		20	64	30	36	10	82	10	2	*	50	40	10	2				------
12	27	60	200		20	20		20	20		90		20	64	20	36	20	71	10	70	10	50							------
1	16	61	1400					20		70	1270	70	630	36	30	72	20	64	10	93	*	40			6	2	1		--743
2	6	61	200								200		40	36	20	64	10	51	10	21	10	60						1	------
2	14	61	400					20		20	310		200	64	10	51	10	36	10	62	10	60							------
3	6	61	400							70	360	40	600	62	10	92	10	16	10	51	10	60							------
3	20	61	2500					40		1910	510	360	580	16	10	2	10	64	10	92	10	70							4-9--
4	3	61	800	20				70		70	670		490	92	10	93	10	86	10	62	10	60					3		------
4	17	61	1400					60		150	1220	20	600	92	10	93	10	36	10	70	10	70	40						--77-
5	8	61	1900	20		20		60		190	1570	20	500	92	50	71	10	93	10	86	*	30							7--63
5	15	61	1100			50		50	20	90	980	70	1340	92	50	36	10	62	10	65	*	40			1				---7-
6	5	61	18800	100	40	1300		2130		14260	950	830	330	27	40	82	40	26	10	36	*	10			3				48933
6	19	61	11900		250	2050		850		8240	560	290	60	27	30	62	10	92	10	36	10	50							-893-
7	3	61	6000	40	640	2260		730		2240	150	100	40	27	80	26	10	82	*	2	*	*							48134
7	17	61	8700	150	410	2130		620		4410	950	810	170	27	90	70	10	15	*	2	*	10			17		1		-8923
8	7	61	9900	310	20	3710		170		5440	270	3170	120	23	80	26	10					10	20		53		2		48125
8	21	61	2700			1240		230		1060	170	290	80	23	40	27	40	26	10	82	10	10							48---
9	5	61	800			200				600				23	60	27	30	26	10	16	*	10			10				4----
9	19	61	1300	70		420		40		250	20	130	90	26	40	23	30	27	20	70	*	10			55		1		4----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE MARYLAND
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN POTOMAC RIVER
STATION LOCATION POTOMAC RIVER AT GREAT FALLS, MARYLAND 40

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	10	60	10	24	3713	248	67	181	3	18	23	1	2	18	2	7	4	1	11
11	14	60	11	28	3457	303	99	204	3	23	37	1	1	33	2	11	8	2	15
12	19	60	1	3	3729	322	60	262	1	11	26	1	2	21	2	6	2	1	13
1	24	61	2	7	3480	365	104	261	7	25	26	1	2	22	1	11	8	2	25
2	27	61	3	13	3216	265	57	208	1	14	16	2	1	12	1	7	4	1	14
4	3	61	4	19	3074	292	97	195	4	27	24	5	3	16	0	10	9	1	22
5	15	61	5	29	4323	106	49	57	1	11	17	4	2	10	1	5	3	0	12
6	26	61	7	14	2934	282	89	193	5	25	27	4	3	19	1	10	8	1	13
8	2	61	8	15	3160	351	117	234	5	30	25	2	3	19	1	13	13	2	29
9	5	61	9	18	3505	251	102	149	4	25	25	3	2	20	0	10	7	2	29

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MARYLAND
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN POTOMAC RIVER
STATION LOCATION POTOMAC RIVER AT GREAT FALLS, MARYLAND 40

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	5	60	17.7	8.2	8.5	.6	5	2.6	6.4	.0	10	85	116	7	20	39	-	172	-
10	10	60	16.1	9.2	8.1	2.2	6	2.7	4.6	.1	6	90	122	5	12	37	-	156	80
10	17	60	29.0	9.0	8.5	3.6	8	2.1	6.0	.1	9	88	118	7	15	35	-	160	550
10	24	60	18.0	10.0	8.7	2.8	11	1.4	4.6	.1	12	102	126	7	10	34	-	176	180
10	31	60	12.5	9.4	8.2	1.2	8	1.7	3.5	.1	14	107	130	7	10	40	-	208	-
11	7	60	8.3	.4	8.4	1.8	8	1.8	4.7	.1	15	95	130	7	12	41	-	177	-
11	7	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
11	14	60	7.3	11.6	8.6	3.6	11	2.7	6.4	.1	14	97	126	6	10	35	-	178	96
11	21	60	8.3	11.8	8.8	1.9	9	1.2	4.5	.0	18	97	144	7	8	47	-	203	-
11	28	60	7.3	12.2	8.4	1.4	9	1.1	4.2	.0	11	100	138	7	8	44	-	191	200
12	5	60	2.8	12.0	8.2	2.6	10	2.2	4.7	.1	11	95	134	10	10	37	-	190	720
1	9	61	1.7	12.2	7.9	1.4	13	3.1	6.5	.1	15	67	118	5	15	40	-	185	1800
1	16	61	2.6	11.8	7.6	3.6	10	1.5	-	.1	10	42	90	-	30	24	-	122	11000
1	23	61	.5	12.0	7.8	1.6	7	-	-	.1	9	57	88	10	16	27	-	141	-
1	30	61	.5	12.0	7.8	1.4	7	1.6	4.6	.1	8	64	96	5	10	27	-	140	93
2	6	61	.5	12.8	7.7	2.6	5	2.5	4.2	.1	8	76	112	5	10	28	-	156	230
2	13	61	1.1	12.2	7.8	1.8	-	.8	4.7	.1	10	75	106	4	7	30	-	162	-
2	20	61	2.8	10.0	7.7	8.6	67	1.8	6.9	.2	7	47	68	25	500	22	-	108	7600
2	27	61	1.2	10.6	7.6	2.4	32	1.2	3.3	.1	3	31	56	40	240	20	-	95	-
3	6	61	10.0	10.8	7.7	1.7	12	1.2	5.6	.1	4	43	64	10	26	23	-	102	4800
3	13	61	5.5	10.2	7.7	1.0	8	1.7	6.4	.1	3	40	66	15	15	22	-	106	7200
3	20	61	3.3	11.2	7.7	1.7	6	2.0	5.7	.1	7	49	76	10	18	23	-	112	3400
3	27	61	12.2	11.0	7.8	2.0	24	1.2	4.6	.1	6	38	60	60	60	23	-	90	2800
4	3	61	10.0	10.2	7.8	2.0	21	1.8	6.0	.0	7	45	66	15	40	23	-	100	7000
4	10	61	9.4	11.2	7.9	1.6	20	2.2	4.9	.1	5	47	72	20	43	23	-	125	3800
4	17	61	12.2	10.6	7.8	1.8	26	1.4	5.8	.1	5	36	58	30	100	21	-	90	6400
4	24	61	17.7	9.0	7.9	1.6	21	2.0	5.5	.0	4	49	70	10	24	22	-	114	-
5	1	61	14.4	9.0	7.8	.2	20	2.0	6.4	.1	4	44	70	7	27	21	-	98	-
5	8	61	15.5	9.2	7.7	1.8	20	1.6	5.9	.0	7	48	66	7	35	22	-	110	-
5	15	61	19.4	7.8	7.9	1.2	27	2.5	7.1	.1	5	53	74	8	38	24	-	117	8600
5	22	61	20.0	8.2	8.0	.7	14	1.1	5.2	.0	9	55	80	5	15	25	-	130	1000
5	29	61	19.0	8.4	8.2	1.2	19	1.3	4.0	.0	6	62	90	4	10	26	-	147	71
6	5	61	23.9	8.8	8.9	2.8	17	2.4	3.9	.0	8	66	94	5	9	25	-	138	160
6	12	61	18.0	7.0	7.8	1.0	20	4.0	9.6	.0	7	60	86	13	41	25	-	133	160
6	19	61	20.0	7.2	8.2	4.2	18	2.7	4.9	.0	7	62	96	25	23	24	-	127	-
6	26	61	26.6	6.6	8.5	2.6	21	1.5	6.4	.0	7	70	106	8	17	24	.1	146	-
7	3	61	30.0	5.8	8.6	1.6	19	2.6	5.4	.1	7	74	104	5	14	25	.1	153	-
7	10	61	26.6	7.0	8.8	1.6	18	2.2	3.8	.1	7	79	110	7	14	26	.1	148	*20
7	17	61	30.5	6.0	8.4	1.7	18	.4	3.4	.1	8	87	118	4	9	27	.1	166	*20
7	24	61	33.3	6.0	8.4	1.7	16	2.1	3.6	.1	10	79	114	6	12	30	.1	167	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MARYLAND
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN POTOMAC RIVER
STATION LOCATION POTOMAC RIVER AT
GREAT FALLS, MARYLAND 40

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	31	61	32.0	6.2	8.5	1.0	19	3.3	5.3	.1	9	80	106	4	9	28	.1	138	-
8	7	61	29.5	6.6	8.4	2.0	19	1.0	2.6	.1	13	68	106	6	11	32	.1	167	-
8	14	61	27.8	5.6	8.1	2.3	18	1.9	-	.1	12	83	124	4	9	35	.1	181	-
8	21	61	25.0	5.2	8.0	2.0	14	5.5	7.9	.1	14	84	132	7	11	37	.1	196	160
8	28	61	30.0	6.8	8.3	2.4	20	2.2	5.2	.2	12	82	126	12	16	38	.2	182	*50
9	5	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
9	9	61	30.0	5.4	7.8	2.4	26	2.1	4.9	.1	12	81	118	5	10	29	.1	151	-
9	11	61	26.1	4.4	7.8	1.6	16	1.2	5.0	.2	9	68	98	16	35	26	.1	131	4800
9	18	61	20.0	6.8	8.3	.2	14	.9	3.2	.1	11	96	140	5	8	34	.2	188	-
9	25	61	24.4	7.4	8.3	1.4	14	1.7	4.5	.1	11	90	140	10	8	30	.2	160	50

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station near Washington, D.C.
Operated by U.S. Geological Survey

STATE Maryland

MAJOR BASIN North Atlantic

MINOR BASIN Potomac River

STATION LOCATION Potomac River at Great Falls, Maryland

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	2.890	1.960	2.110	3.500	4.500	51.700	25.200	19.900	7.020	4.450	2.800	2.350
2	2.680	1.920	2.000	4.700	4.500	39.200	26.900	18.800	6.900	4.300	2.720	2.070
3	2.470	2.310	1.960	4.700	4.000	31.200	30.100	17.500	6.540	3.920	2.680	2.150
4	2.430	2.430	1.960	4.850	4.000	26.200	27.600	16.700	6.540	3.870	2.680	2.270
5	2.390	2.350	1.880	4.700	4.500	23.400	23.800	15.800	6.720	3.690	2.680	2.150
6	2.350	2.270	1.880	4.500	4.500	28.200	21.000	14.600	7.860	3.640	2.470	2.230
7	2.310	2.310	1.880	4.350	4.000	32.100	18.400	13.800	7.680	3.820	2.890	2.390
8	2.230	2.350	1.850	4.300	4.500	35.500	16.300	14.200	7.140	3.780	3.230	3.540
9	2.110	2.350	1.730	3.780	4.500	35.900	14.700	15.900	7.080	3.730	3.550	5.290
10	2.040	2.430	1.730	4.210	4.500	39.100	19.200	19.300	9.520	3.780	3.190	4.250
11	2.000	2.470	1.770	5.120	5.000	38.700	27.300	19.400	11.500	3.640	2.840	3.410
12	2.000	2.430	1.610	5.240	5.000	31.800	34.500	19.600	10.900	3.640	2.720	3.190
13	2.000	2.470	1.160	4.700	5.000	26.600	53.100	24.100	11.100	3.500	2.680	3.010
14	2.000	2.390	1.440	4.350	5.000	22.700	77.800	30.800	10.800	4.910	2.550	2.760
15	1.960	2.350	1.770	4.800	6.000	21.200	81.000	33.600	9.450	4.000	2.230	2.550
16	1.960	2.630	2.000	6.420	6.960	19.400	61.400	28.900	9.240	3.550	3.010	2.150
17	1.960	2.590	1.850	6.720	9.310	17.400	60.400	23.200	8.640	3.500	3.190	2.040
18	1.850	2.470	1.850	7.440	16.900	15.400	70.700	19.800	7.860	4.350	2.760	1.920
19	1.770	2.230	1.810	8.380	45.700	15.700	56.600	17.400	6.900	4.110	2.470	1.770
20	2.040	2.310	1.770	8.260	91.300	16.600	41.400	15.400	6.000	3.690	2.350	1.730
21	2.150	2.190	2.040	7.320	10.000	19.000	31.600	14.100	5.520	3.370	2.550	1.690
22	2.230	2.110	1.770	6.300	71.600	23.400	25.800	13.400	5.520	3.010	2.270	1.650
23	2.430	2.110	1.690	6.360	58.600	30.600	22.700	12.000	6.240	2.890	2.510	1.730
24	2.230	2.040	1.580	5.640	60.800	35.600	21.600	11.200	7.440	2.840	2.190	1.770
25	2.070	1.960	1.650	5.240	74.400	37.700	20.600	10.400	7.020	2.800	2.040	1.880
26	2.350	1.960	1.650	4.750	87.200	47.300	19.500	9.660	6.840	3.060	2.720	2.040
27	2.230	1.920	1.610	4.500	98.400	47.500	24.200	9.310	6.300	3.100	2.630	1.960
28	2.070	1.880	1.580	4.000	78.400	39.600	27.800	8.580	5.580	2.840	2.510	1.960
29	2.040	1.850	1.810	4.500		33.500	25.000	8.120	5.120	2.800	2.270	1.880
30	1.920	2.040	2.270	5.000		29.300	21.900	7.800	4.650	2.760	2.630	1.810
31	1.880		2.350	4.800		25.600		7.380		2.720	2.630	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE MARYLAND

MAJOR BASIN NORTH ATLANTIC

MINOR BASIN POTOMAC RIVER

STATION LOCATION POTOMAC RIVER AT WILLIAMSPORT, MARYLAND

41

DATE SAMPLE TAKEN			DATE OF DETERMINATION		RADIOACTIVITY IN WATER: ALPHA			RADIOACTIVITY IN WATER: BETA			RADIOACTIVITY IN PLANKTON (dry): DATE OF DETERMINATION		RADIOACTIVITY IN PLANKTON (dry): GROSS ACTIVITY		RADIOACTIVITY IN WATER: GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	µµc/l	µµc/l	µµc/l	µµc/l	µµc/l	µµc/l	MO.	DAY	µµc/g	µµc/g	µµc/l	µµc/l	µµc/l
11	28	60*	12	7	0	0	0	0	0	0							
12	19	60*	1	19	0	0	0	0	0	0							
1	30	61*	2	10	0	0	0	3	0	3							
2	27	61*	3	10	1	0	1	6	0	6							
3	27	61*	4	10	1	0	1	4	0	4							
4	24	61*	5	12	0	0	0	0	7	7							
5	29	61*	6	9	0	0	0	0	0	0							
6	26	61*	7	17	0	0	0	0	0	0							
7	31	61*	8	25	0	0	0	0	0	0							
8	28	61*	9	15	0	0	0	2	5	7							
9	5	61	9	28	-	-	-	3	5	8							
9	11	61	10	5	0	0	0	1	0	1							
9	18	61	10	26	-	-	-	5	5	10							
9	25	61	10	10	-	-	-	3	19	22							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE MARYLAND
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN POTOMAC RIVER
STATION LOCATION POTOMAC RIVER AT WILLIAMSPORT, MARYLAND

41

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS														PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE							
10	31	60	300							50	290		90	64	*	82	10	16	10	65	*	20	90						-----3
11	14	60	100								90		20	2	40	36	10	16	10	33	10	50							------
12	5	60	100					40			110		90	2	30	36	20	70	10	71	10	40	20						------
12	19	60	100										20	2	30	36	20	71	10	16	10	40					1		------
1	3	61	300				20			20	220		20	36	20	2	10	45	10	71	10	50							------
1	16	61	200				20				130		110	36	10	2	10	31	10	93	10	60			3				------
2	6	61					20				20			45	50	92	10	36	10	2	10	30		10					------
2	20	61	1300							180	1230	130	3390																--75-
3	6	61	200							70	130		160										90				4		------
3	20	61	200					20		20	130		90																------
4	3	61	200					20			130		220										20			2	3		------
4	17	61	1100		20						1100	50	1360	33	10	92	10	31	10	52	10	60	20						7--5-
5	1	61	200							20	190		60	92	20	2	10	31	10	33	10	50			5				------
5	15	61	1300						40	20	1240		370	33	40	92	30	2	10	36	10	20			4				7--5-
6	5	61	2300	20		440		210		1300	290	20	410	33	30	62	20	92	10	31	10	40							4--3-
6	19	61	700	40		70		40		200	360	70	470	33	20	62	20	16	10	92	10	60			2				4----
7	3	61	400			40				250	70	50	220	27	50	28	10	82	10	16	*	40							4----
7	17	61	400		20	40				170	120	40	80	27	20	16	10	2	10	33	10	60			1	1	3		------
8	7	61	900		440	130				40	270	20	80	16	10	2	10	27	10	33	10	60			3				-----4
8	21	61	1100			60		100		680	210	20	190	16	20	27	20	2	10	52	10	50			8				4----
9	5	61	100							40		20	80	16	20	2	10	52	10	27	10	60							------
9	18	61	100			20				20	20		80	16	50	2	20	52	10	27	*	30	40	10	5				------

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE MARYLAND
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN POTOMAC RIVER
STATION LOCATION POTOMAC RIVER AT WILLIAMSPORT, MARYLAND 41

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	3	60	10	10	4878	159	42	117	0	10	17	1	1	14	1	4	2	1	8
10	31	60	11	7	4683	313	166	147	2	48	80	2	2	68	8	17	12	5	2
11	28	60	12	5	5006	144	32	112	0	6	16	1	1	13	1	4	1	1	4
1	3	61	1	11	4937	197	80	117	2	14	30	2	2	22	4	10	6	2	16
1	30	61	2	6	5203	207	53	154	1	11	17	1	1	13	2	6	5	1	12
2	27	61	3	7	4175	222	88	134	8	26	15	2	2	11	0	8	8	1	22
4	3	61	4	10	4308	183	49	134	3	13	12	1	1	9	1	6	3	0	12
5	29	61	6	5	4626	192	65	127	2	15	19	1	1	16	1	8	5	1	15
7	3	61	7	10	4557	153	53	100	3	13	18	3	1	13	1	6	4	1	8
7	31	61	8	7	4737	209	83	126	3	17	27	2	2	23	0	10	9	2	15
9	5	61	9	11	4707	213	100	113	7	21	33	2	1	26	4	12	10	2	15

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MARYLAND
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN POTOMAC RIVER
STATION LOCATION POTOMAC RIVER AT WILLIAMSPORT, MARYLAND

41

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
11	14	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
11	16	60	7.0	-	7.3	-	-	-	-	-	-	68	118	5	10	-	-	-	-
11	21	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
11	22	60	7.0	-	7.3	-	-	-	-	-	-	70	124	5	12	-	-	-	-
11	28	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
11	29	60	7.0	-	7.5	-	-	-	-	-	-	76	138	5	18	-	-	-	-
12	5	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
12	6	60	4.4	-	7.5	-	-	-	-	-	-	80	152	5	14	-	-	-	-
12	19	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
12	21	60	1.0	-	7.6	-	-	-	-	-	-	80	156	5	12	-	-	-	-
1	9	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
1	10	61	-	-	7.3	-	-	-	-	-	-	58	108	5	45	-	-	-	-
1	16	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	270
1	17	61	1.7	-	7 -	-	-	-	-	-	-	50	108	5	15	-	-	-	-
1	23	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
1	24	61	.6	-	7.3	-	-	-	-	-	-	34	102	5	16	-	-	-	-
2	6	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24
2	7	61	.6	-	7.1	-	-	-	-	-	-	52	86	5	8	-	-	-	-
2	13	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42
2	14	61	.6	-	7.2	-	-	-	-	-	-	68	122	5	14	-	-	-	-
2	20	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1100
2	21	61	1.7	-	6.9	-	-	-	-	-	-	22	46	-	300	-	-	-	-
2	27	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1700
2	28	61	6.1	-	7.0	-	-	-	-	-	-	10	36	-	150	-	-	-	-
3	13	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	230
3	14	61	6.7	-	7.2	-	-	-	-	-	-	32	68	5	10	-	-	-	-
3	20	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	170
3	21	61	5.6	-	7.3	-	-	-	-	-	-	28	60	5	35	-	-	-	-
3	28	61	7.2	-	7.3	-	-	-	-	-	-	24	50	5	25	-	-	-	-
4	3	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	88
4	4	61	6.7	-	7.3	-	-	-	-	-	-	26	60	5	18	-	-	-	-
4	10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	530
4	17	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9000
4	18	61	8.9	-	7.1	-	-	-	-	-	-	22	44	-	150	-	-	-	-
4	24	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	81
4	25	61	13.9	-	7.3	-	-	-	-	-	-	32	70	5	12	-	-	-	-
5	1	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240
5	8	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
5	9	61	13.9	-	7.3	-	-	-	-	-	-	42	76	5	12	-	-	-	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MARYLAND

MAJOR BASIN NORTH ATLANTIC

MINOR BASIN POTOMAC RIVER

STATION LOCATION POTOMAC RIVER AT WILLIAMSPORT, MARYLAND 41

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
5	15	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2300
5	17	61	18.0	-	7.5	-	-	-	-	-	-	36	64	5	10	-	-	-	-
6	5	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
6	7	61	22.0	-	7.4	-	-	-	-	-	-	46	84	5	10	-	-	-	-
6	12	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300
6	13	61	23.9	-	7.5	-	-	-	-	-	-		64	5	6	-	-	-	-
6	19	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
6	21	61	24.0	-	7.7	-	-	-	-	-	-	48	72	5	8	-	-	-	-
6	26	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
6	27	61	21.7	-	7.6	-	-	-	-	-	-	58	86	5	15	-	-	-	-
7	3	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
7	10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1200
7	11	61	22.8	-	7.9	-	-	-	-	-	-	68	108	5	2	-	-	-	-
7	17	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
7	19	61	25.5	-	7.8	-	-	-	-	-	-	76	132	5	3	-	-	-	-
7	24	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76
7	31	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160
8	2	61	26.5	-	7.9	-	-	-	-	-	-	82	132	5	1	-	-	-	-
8	7	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	130
8	9	61	26.0	-	7.6	-	-	-	-	-	-	84	141	5	2	-	-	-	-
8	14	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	270
8	16	61	24.5	-	8.1	-	-	-	-	-	-	70	160	15	4	-	-	-	-
8	21	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
8	23	61	20.6	-	7.9	-	-	-	-	-	-	78	96	10	4	-	-	-	-
8	28	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68
8	29	61	26.1	-	7.9	-	-	-	-	-	-	76	118	5	2	-	-	-	-
9	7	61	26.7	-	7.9	-	-	-	-	-	-	80	126	5	8	-	-	-	-
9	11	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	470
9	13	61	26.7	-	7.8	-	-	-	-	-	-	74	110	10	8	-	-	-	-
9	18	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	670
9	19	61	21.1	-	8.1	-	-	-	-	-	-	80	120	10	1	-	-	-	-
9	25	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	560

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Computed Data for Williamsport, Maryland
Operated by U.S. Geological Survey

STATE Maryland

MAJOR BASIN North Atlantic

MINOR BASIN Potomac River

STATION LOCATION Potomac River at Williamsport, Maryland

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	2.840	2.210	2.050	3.350	3.100	46.400	23.500	19.000	7.640	5.010	3.100	2.860
2	2.840	2.470	2.100	4.600	3.090	35.800	27.400	17.900	7.380	4.470	2.940	2.800
3	2.770	2.480	2.100	5.140	3.090	28.800	30.500	17.500	7.210	4.210	2.900	2.660
4	2.730	2.530	2.080	5.100	3.200	24.400	26.800	17.100	7.270	4.080	3.140	2.430
5	2.640	2.500	2.100	5.000	3.320	23.300	23.500	16.000	8.380	3.890	2.880	2.400
6	2.620	2.520	2.070	4.720	3.480	28.100	20.800	14.800	8.510	4.090	3.510	2.750
7	2.460	2.610	2.000	4.400	3.740	31.000	18.400	14.100	7.930	4.110	3.920	3.350
8	2.360	2.560	2.000	4.270	4.320	31.500	16.400	15.100	7.500	4.320	4.740	3.770
9	2.250	2.510	1.980	3.760	4.900	30.500	14.800	19.600	8.110	4.360	3.890	4.440
10	2.370	2.440	1.960	4.260	4.900	37.100	19.000	21.100	9.040	4.260	3.560	3.700
11	2.370	2.460	1.960	4.750	4.900	35.300	29.700	20.400	12.700	4.460	3.270	3.930
12	2.360	2.480	1.900	4.900	4.900	28.400	38.400	21.900	12.900	4.020	3.380	3.750
13	2.310	2.440	1.880	4.500	5.150	23.800	49.600	31.200	12.000	3.630	3.260	3.460
14	2.380	2.510	1.860	4.120	5.500	21.400	93.000	37.900	10.000	3.830	2.710	3.120
15	2.290	2.830	2.000	3.960	6.200	19.700	80.500	37.600	9.460	4.230	3.770	2.630
16	2.340	2.750	2.200	4.530	7.600	18.500	62.700	29.900	9.740	3.750	3.770	2.380
17	2.100	2.640	2.100	5.360	11.900	16.800	65.800	24.600	9.300	4.200	3.210	2.250
18	2.110	2.440	2.090	6.170	21.800	15.200	73.600	21.700	8.330	4.200	2.910	2.020
19	2.180	2.470	2.080	7.640	53.000	14.900	53.500	19.000	7.240	3.950	2.720	1.920
20	2.470	2.360	2.180	7.700	108.900	16.300	39.000	17.000	6.410	3.810	2.700	1.870
21	2.500	2.320	2.080	6.180	105.700	19.300	30.100	15.800	5.820	3.440	2.510	2.020
22	2.620	2.240	1.970	5.390	60.100	21.100	25.400	14.500	6.320	3.440	2.720	2.240
23	2.450	2.180	1.860	4.780	49.900	25.400	23.100	13.100	7.910	3.300	2.390	2.450
24	2.560	2.120	1.960	4.330	58.800	33.400	22.200	12.100	7.960	3.230	2.090	2.880
25	2.770	2.100	1.910	4.000	72.500	41.300	20.600	11.200	7.780	4.000	2.240	2.770
26	2.530	2.060	1.950	3.770	86.000	50.300	20.200	10.500	7.010	3.750	2.760	2.610
27	2.380	2.040	2.030	3.550	103.100	46.500	24.900	9.790	6.330	3.560	2.590	2.550
28	2.300	2.050	2.100	3.430	67.300	37.500	26.000	9.130	6.010	3.210	2.690	2.440
29	2.200	2.130	2.320	3.320		32.500	22.700	8.740	5.380	3.240	3.990	2.200
30	2.180	2.200	2.540	3.210		28.100	20.400	8.410	5.130	3.170	3.480	2.080
31	2.130		2.350	3.200		24.600		7.820		3.370	2.840	

Computed as sum of Potomac River at Point of Rocks, Maryland plus Shenandoah River at Millville, West Virginia.

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE ·MINNESOTA

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN RAINY RIVER

STATION LOCATION RAINY RIVER AT

BAUDETTE, MINNESOTA 96

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER										RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
9	27	61	10	13	0	0	0	14	32	46									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE MINNESOTA
MAJOR BASIN UPPER MISSISSIPPI RIVER
MINOR BASIN RAINY RIVER
STATION LOCATION RAINY RIVER AT
BAUDETTE, MINNESOTA 96

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
			TOTAL	BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR		COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
9	27	61	700			20				270	410	40	120	16	10	83	10	60	10	56	10	50	990		39	1	1	1	----7

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Manitou Rapids, Minnesota
Operated by U.S. Geological Survey

STATE Minnesota

MAJOR BASIN Upper Mississippi River

MINOR BASIN Rainy River

STATION LOCATION Rainy River at Baudette, Minnesota

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	8.530	6.530	6.250	5.600	6.400	7.150	9.780	16.700	13.100	8.350	7.940	7.440
2	8.160	6.140	5.990	5.180	7.220	6.540	9.430	15.000	15.600	5.760	8.080	8.120
3	5.160	5.250	5.980	6.500	7.790	6.500	9.330	14.200	19.300	5.060	8.660	5.810
4	6.050	5.030	4.000	6.120	7.200	6.770	8.930	14.600	20.500	4.100	8.750	4.180
5	7.940	5.480	3.450	6.250	6.300	7.990	8.510	14.400	20.600	3.900	8.840	3.710
6	8.530	4.500	6.500	6.450	7.150	6.310	8.160	14.000	20.400	6.380	7.860	6.770
7	8.290	4.310	7.700	6.650	7.660	6.940	8.200	14.100	20.000	8.160	5.840	7.120
8	8.040	6.490	7.400	4.180	7.790	6.290	8.440	14.700	19.600	8.180	5.350	7.680
9	6.030	7.160	6.800	4.400	7.470	6.320	8.100	15.500	19.400	7.160	7.500	7.780
10	4.100	7.000	6.700	5.500	7.460	7.320	8.350	15.800	19.500	4.740	8.490	7.680
11	5.700	6.590	4.800	6.190	7.750	7.130	8.510	15.500	19.500	4.500	8.750	5.330
12	6.720	6.570	3.960	6.180	7.160	5.630	8.750	15.300	19.400	6.720	8.570	5.570
13	7.200	4.840	6.300	6.110	6.740	7.280	8.710	15.400	19.100	7.920	8.000	8.730
14	7.280	4.210	7.180	6.220	7.650	7.230	8.530	16.200	19.200	8.000	7.020	10.900
15	6.590	4.290	6.780	4.000	7.470	6.810	8.490	18.500	19.000	7.300	7.960	11.600
16	4.780	5.720	7.120	2.830	7.810	6.850	9.360	21.200	18.900	7.200	8.660	12.000
17	4.460	6.100	6.790	6.700	7.940	6.670	9.940	24.300	18.100	5.570	8.330	11.500
18	6.280	5.670	4.000	6.850	7.530	6.810	10.600	25.300	13.200	5.300	8.880	8.100
19	7.740	5.760	3.000	6.300	7.390	7.560	11.400	24.300	10.600	7.800	8.950	6.960
20	7.700	5.690	5.300	5.900	6.500	7.810	12.000	22.500	10.100	8.790	8.550	9.500
21	8.350	4.580	6.120	6.690	7.100	7.580	14.700	20.700	10.400	8.930	7.080	10.600
22	8.330	5.840	5.070	5.320	6.330	7.210	18.800	19.300	9.660	9.080	5.060	11.100
23	5.790	6.700	6.040	7.820	7.580	6.970	20.600	18.100	8.950	9.180	6.960	11.000
24	4.160	6.300	6.400	7.000	7.670	8.250	19.100	16.900	8.790	9.430	7.860	10.500
25	5.860	4.720	5.210	6.070	6.930	8.770	20.700	16.100	8.060	8.060	8.310	8.270
26	7.460	4.720	4.700	6.200	6.680	9.640	20.900	16.800	6.140	8.310	8.270	8.620
27	7.920	4.260	5.100	6.500	6.390	10.700	20.600	16.700	7.000	9.080	7.900	9.980
28	7.940	4.450	6.400	7.600	7.090	10.400	19.800	16.200	7.940	8.930	5.880	10.600
29	7.760	5.960	7.030	5.440		10.600	18.700	15.700	8.770	8.900	4.360	10.700
30	5.960	6.800	6.190	5.100		10.400	17.700	14.200	8.950	8.970	6.640	11.000
31	4.420		6.810	7.000		10.300		12.800		9.500	7.100	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE NORTH DAKOTA

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN RED RIVER OF THE NORTH

STATION LOCATION RED RIVER AT GRAND FORKS, NORTH DAKOTA 69

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	12	60	10	21	0	0	0	0	5	5									
10	18	60	11	3	1	4	5	0	5	5									
11	2	60	11	23	0	3	3	0	0	0									
11	10	60	11	29	1	1	2	0	0	0									
11	30	60	12	9	0	1	1	0	0	0									
12	7	60	12	27	0	7	7	0	0	0									
12	15	60	1	10	0	0	0	0	19	19									
12	21	60	1	10	0	4	4	0	12	12									
12	29	60	1	11	1	7	8	0	7	7									
1	4	61	1	20	0	7	7	0	11	11									
1	11	61	2	3	0	4	4	0	0	0									
1	18	61	2	7	0	4	4	0	18	18									
1	25	61	2	6	0	1	1	0	0	0									
2	2	61	2	16	0	0	0	1	0	1									
2	8	61	2	23	0	2	2	0	0	0									
2	15	61	3	6	0	0	0	0	0	0									
2	22	61	3	7	0	0	0	0	0	0									
3	1	61	3	17	0	1	1	0	0	0									
3	8	61	3	28	0	2	2	0	3	3									
3	15	61	4	3	0	2	2	0	2	2									
3	22	61	4	7	0	2	2	0	14	14									
4	5	61	4	19	0	2	2	4	0	4									
4	12	61	5	2	0	0	0	0	1	1									
4	19	61	5	22	0	2	2	1	1	2									
4	27	61	5	15	1	0	1	0	6	6									
6	1	61*	6	13	0	2	2	0	0	0									
6	22	61*	7	25	0	1	1	0	0	0									
8	31	61*	9	15	0	0	0	0	30	30									
9	6	61	9	29	-	-	-	0	0	0									
9	20	61	10	9	-	-	-	0	63	63									
9	27	61	10	10	-	-	-	9	21	30									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE NORTH DAKOTA

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN RED RIVER OF THE NORTH

STATION LOCATION RED RIVER AT

GRAND FORKS, NORTH DAKOTA 69

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	PROTOZOA (No. per ml.)	MICROINVERTEBRATES				DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS															ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE							
10	12	60	1600	110		290		130	290	460	350	550	150	89	30	81	30	26	10	23	10	10	40		80	1			779-3
11	10	60	56100	70		470		90	70	54740	690	380	160	82	90	89	*						20		4				-897-
12	7	60	10300			20		90		10120	70	240		82	90	67	*		1				40	10	3				--9--
12	21	60	6600	20	40	260		40		6160	40	350	20	82	90	56	*	70	*				90		15				--9--
1	4	61	3700							3640	20	200	20	82	90								20	10	8	1			--9--
1	18	61	1000			20				1010	20	160		82	90	70	*	71	*			10				2	2		--9--
2	2	61	1300			20				1160	70	160	50	82	90	70	*	71	*	26	*	10		10					--9--
2	15	61	200							220		40		82	70	27	10	71	10	56	*	10				1			--9--
3	1	61	300			40				200		90	110	82	50	49	30	70	*	46	*	20			3				--9--
3	22	61	6900		4270	110		290	50	2010	160	400	70	82	70	71	10	72	10	92	*	10			8		2		-69--
4	5	61	32400			490		2350	200	28800	540	650	360	82	90	71	*	58	*	89	*	10	20		6				-1935
4	19	61	102400			130		540		100770	990	350	20	82	90	58	*								61	13	11		71973
5	2	61	30400	20		1350	20	560	20	26230	2240	1240	410	82	80	56	*	86	*	70	*	10		20	11		3		-8923
5	17	61	18300		20	810		680	120	12650	4020	4060	330	82	60	56	10	26	10	92	10	20			329	11	1	8	74963
6	1	61	2300			380		450	110	890	470	2010	450	56	40	82	20	58	20	9	*	10			999	17	4	2	-1917
6	14	61	2300	70		400		380	20	510	920	340	220	58	70	56	10	82	10	71	*	20			15	8			7-967
8	7	61	15700	20	6350	1730		810	20	2670	4100	660	120	89	60	58	20	92	10	82	*	10	20		582	796	1		2197-
8	24	61	12200		40	560		810	20	8740	2070	970	270	84	60	82	20	92	20	23	*	*		10	506	876	19		4197-
9	20	61	9700		940	560		1160		6810	250	2020	110	55	30	82	20	56	20	75	10	10			188	120	10		829-7

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE	NORTH DAKOTA
MAJOR BASIN	UPPER MISSISSIPPI RIVER
MINOR BASIN	RED RIVER OF THE NORTH
STATION LOCATION	RED RIVER AT GRAND FORKS, NORTH DAKOTA

69

DATE OF SAMPLE: BEGINNING			END		GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
											NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
12	14	60	12	21	5820	179	36	143	1	9	12	1	1	9	1	4	2	1	7
1	18	61	1	25	7980	113	36	77	2	10	11	1	1	8	1	4	2	1	6
2	15	61	3	1	6220	262	70	192	2	20	20	2	2	15	1	8	7	1	12
3	24	61	4	5	4670	183	64	119	3	17	17	1	1	14	1	7	7	1	12
5	17	61	6	1	3172	283	118	165	6	32	33	6	3	23	1	12	11	2	22
8	1	61	8	16	1340	689	162	527	5	39	60	14	7	39	0	23	11	3	21
9	6	61	9	20	3300	505	213	292	21	36	47	5	4	38	0	64	17	4	24

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NORTH DAKOTA

MAJOR BASIN UPPER MISSISSIPPI RIVER

MINOR BASIN RED RIVER OF THE NORTH

STATION LOCATION RED RIVER AT GRAND FORKS, NORTH DAKOTA 69

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	12	60	12.5	5.5	8.6	2.1	28	5.0	12.4	.3	11	232	260	30	19	10	.0	371	80
10	18	60	9.1	5.5	8.5	2.4	22	4.3	10.4	.1	12	240	264	25	17	16	.0	-	310
11	2	60	4.9	10.6	9.0	.0	29	4.5	10.7	.1	15	250	268	30	10	25	.0	378	73
11	10	60	1.5	-	8.9	-	29	4.6	-	.1	16	266	272	25	16	26	-	384	-
11	17	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80
11	30	60	.1	10.4	8.0	3.6	42	1.8	-	-	18	280	316	30	6	21	-	448	-
12	7	60	.2	12.0	8.0	2.9	39	.6	13.3	-	21	300	340	30	8	22	-	502	-
12	14	60	.4	.1	7.6	5.5	39	.6	13.8	-	38	320	352	30	8	28	-	509	-
12	15	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2200
12	21	60	.4	.7	7.6	-	35	.6	-	-	21	302	340	25	6	37	-	490	110
12	29	60	.5	.4	7.5	2.5	40	.8	17.7	-	27	318	356	25	6	32	-	519	180
1	4	61	.4	.4	7.5	1.3	38	.8	17.8	-	24	324	344	25	5	38	-	506	350
1	11	61	.5	.2	7.5	1.2	35	.7	-	-	21	316	344	20	5	28	-	486	250
1	18	61	.4	.5	7.5	.6	31	.8	17.7	-	21	302	324	20	5	24	-	454	840
1	25	61	.4	.5	7.5	-	34	.6	17.8	-	20	306	320	15	5	24	-	474	620
2	2	61	.4	.4	7.5	.9	32	.6	18.4	-	21	314	332	15	4	28	-	480	540
2	8	61	1.0	.0	7.5	8.3	52	.6	18.5	-	24	320	336	15	4	26	-	495	190
2	15	61	.4	.1	7.5	1.2	36	2.1	-	-	18	306	316	15	4	25	-	447	530
2	22	61	.6	.6	7.5	1.0	33	.9	18.2	-	19	304	312	15	4	24	-	437	530
3	1	61	.6	.9	7.5	-	33	.7	17.7	-	16	288	300	15	4	22	-	422	850
3	8	61	.4	3.6	7.5	4.1	38	.9	16.2	-	17	248	264	30	8	30	-	397	-
3	15	61	.6	6.6	7.6	4.5	48	.9	18.4	-	11	176	216	50	17	28	-	338	-
3	22	61	.8	4.5	7.7	7.8	41	3.1	-	-	15	180	216	50	17	-	-	35-	820
4	5	61	1.8	12.9	8.3	4.1	40	.9	12.7	-	11	200	248	25	27	-	-	358	270
4	12	61	4.8	14.6	8.5	5.2	46	.9	11.3	-	12	212	260	25	21	-	-	360	170
4	19	61	4.2	14.5	8.9	5.3	47	-	13.7	-	11	226	276	25	30	-	-	393	100
4	27	61	8.6	11.8	8.8	4.1	42	4.6	11.5	-	10	222	280	20	32	67	.0	385	140
5	3	61	9.6	12.4	8.6	3.4	40	4.5	11.4	-	12	224	288	20	23	86	-	414	200
5	11	61	10.6	13.2	8.8	4.2	44	4.6	13.3	-	12	228	300	25	14	104	-	435	80
5	17	61	13.4	11.3	8.7	4.0	40	4.5	11.4	-	12	242	316	30	16	102	-	444	-
5	24	61	18.3	7.9	8.4	-	50	6.5	17.5	-	10	248	340	50	44	152	-	496	740
6	1	61	19.8	6.6	8.2	5.2	46	6.5	15.4	-	10	248	332	35	24	116	-	463	1400
6	7	61	23.2	5.9	8.3	2.1	48	6.9	15.3	-	12	250	312	30	17	98	-	437	3700
6	14	61	23.6	5.3	8.2	1.9	47	4.7	11.0	-	11	238	272	25	12	117	-	421	660
6	22	61	20.5	5.4	7.8	-	56	4.3	10.6	-	9	244	260	25	22	120	-	358	580
8	9	61	25.1	8.2	8.8	7.2	50	4.8	14.9	-	9	206	232	25	-	58	-	312	*20
8	16	61	23.6	6.9	9.0	4.6	55	4.4	12.8	-	13	186	208	25	-	60	-	310	20
8	24	61	23.8	7.9	-	8.1	52	2.8	-	-	18	202	236	20	-	62	-	358	80

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NORTH DAKOTA
MAJOR BASIN UPPER MISSISSIPPI RIVER
MINOR BASIN RED RIVER OF THE NORTH
STATION LOCATION RED RIVER AT
GRAND FORKS, NORTH DAKOTA 69

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
8	31	61	22.8	4.6	8.6	3.7	48	4.2	12.9	-	18	194	224	20	-	76	-	362	-
9	6	61	18.5	3.8	8.4	-	50	.9	10.8	-	22	178	216	20	-	76	-	346	110
9	20	61	15.4	8.6	8.5	2.9	50	4.0	10.6	-	25	202	232	20	-	84	-	375	-
9	27	61	13.9	6.8	9.0	5.6	60	2.9	10.8	-	27	182	216	20	-	76	-	337	320

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Grand Forks, North Dakota
Operated by U.S. Geological Survey

STATE North Dakota

MAJOR BASIN Upper Mississippi River

MINOR BASIN Red River of the North

STATION LOCATION Red River at Grand Forks, North Dakota

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	.322	.560	.250	.240	.280	.420	2.660	2.520	1.470	.518	.348	.156
2	.315	.560	.260	.240	.280	.450	2.200	2.400	1.380	.518	.350	.146
3	.312	.596	.270	.240	.280	.500	2.020	2.300	1.280	.518	.352	.135
4	.302	.589	.300	.240	.280	.530	1.950	2.160	1.190	.503	.335	.135
5	.275	.592	.360	.240	.290	.560	1.870	2.020	1.120	.464	.318	.119
6	.270	.603	.350	.240	.290	.630	1.680	1.950	1.070	.392	.290	.122
7	.278	.603	.260	.250	.290	.770	1.560	1.880	1.030	.338	.261	.119
8	.272	.572	.240	.250	.290	.970	1.440	1.840	.999	.305	.253	.123
9	.278	.560	.250	.250	.300	1.180	1.380	1.840	.975	.275	.241	.119
10	.280	.430	.280	.260	.300	1.360	1.350	1.870	.967	.298	.229	.145
11	.298	.380	.320	.260	.300	1.500	1.300	1.880	.991	.345	.215	.199
12	.308	.390	.350	.260	.310	1.600	1.260	1.880	1.170	.362	.209	.233
13	.310	.440	.350	.280	.320	1.650	1.210	1.860	1.180	.365	.201	.350
14	.308	.470	.350	.280	.330	1.650	1.160	1.790	1.060	.407	.197	.458
15	.310	.500	.340	.290	.340	1.620	1.120	1.780	.967	.440	.194	.446
16	.308	.470	.330	.270	.340	1.600	1.060	1.920	.891	.437	.190	.407
17	.315	.410	.310	.280	.340	1.580	1.070	2.200	.830	.428	.190	.392
18	.312	.350	.300	.290	.340	1.660	1.060	2.600	.785	.401	.201	.401
19	.358	.410	.300	.280	.340	1.740	1.050	2.840	.760	.377	.194	.434
20	.383	.490	.290	.310	.340	1.760	1.020	2.880	.729	.380	.181	.458
21	.392	.510	.290	.310	.350	1.800	1.100	2.840	.712	.419	.182	.467
22	.392	.490	.280	.310	.350	1.900	1.310	2.750	.701	.437	.182	.449
23	.392	.420	.280	.300	.360	2.000	1.840	2.620	.666	.437	.173	.461
24	.401	.360	.270	.300	.370	2.100	2.240	2.460	.638	.434	.165	.503
25	.377	.380	.260	.290	.350	2.300	2.390	2.300	.631	.416	.156	.542
26	.389	.440	.250	.270	.370	2.800	2.420	2.140	.614	.383	.158	.536
27	.380	.420	.250	.280	.390	3.240	2.480	2.010	.563	.362	.153	.533
28	.374	.420	.230	.270	.400	3.320	2.580	1.870	.497	.360	.155	.503
29	.395	.410	.230	.270		3.050	2.610	1.760	.467	.383	.165	.479
30	.494	.280	.230	.280		2.940	2.600	1.660	.488	.368	.161	.467
31	.539		.230	.280		2.810		1.560		.358	.163	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE LOUISIANA

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER RED RIVER BELOW DENISON

STATION LOCATION RED RIVER AT ALEXANDRIA, LOUISIANA 42

DATE SAMPLE TAKEN MO.	DAY	YEAR	RADIOACTIVITY IN WATER: DATE OF DETERMINATION MONTH	DAY	ALPHA SUSPENDED µµc/l	ALPHA DISSOLVED µµc/l	ALPHA TOTAL µµc/l	BETA SUSPENDED µµc/l	BETA DISSOLVED µµc/l	BETA TOTAL µµc/l	RADIOACTIVITY IN PLANKTON (dry): DATE OF DETERMINATION MO.	DAY	GROSS ACTIVITY ALPHA µµc/g	GROSS ACTIVITY BETA µµc/g	RADIOACTIVITY IN WATER GROSS ACTIVITY SUSPENDED µµc/l	DISSOLVED µµc/l	TOTAL µµc/l
10	24	60*	11	8	2	6	8	0	0	0							
11	28	60*	12	9	5	4	9	11	3	14							
12	12	60*	1	17	4	1	5	38	0	38							
1	30	61*	2	13	10	1	11	51	2	53							
2	27	61*	3	10	5	1	6	0	0	0							
3	27	61*	4	10	5	0	5	11	2	13							
4	17	61*	5	19	28	0	28	56	0	56							
5	22	61	6	27	4	0	4	0	9	9							
6	19	61*	8	2	1	5	6	0	0	0							
8	1	61*	8	25	0	0	0	16	9	25							
8	28	61*	9	12	1	0	1	5	13	18							
9	11	61	10	3	-	-	-	1	38	39							
9	18	61	10	20	-	-	-	0	13	13							
9	25	61	10	7	-	-	-	18	0	18							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE LOUISIANA

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER RED RIVER BELOW DENISON

STATION LOCATION RED RIVER AT ALEXANDRIA, LOUISIANA 42

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	18	60	2700	20		200		270	20	360	1860	560	800	38	20	56	10	26	10	18	10	40	50		3				74763
11	7	60	600			40		40		180	370	150	130										20			2			------
11	28	60	4000			1120		560	20	270	2060	20	90	38	50	56	10	26	10	7	10	30							--833
1	9	61	200						50	20	90																		------
2	5	61	200					70	90		90		110	89	30	92	20	56	10	38	*	40							------
2	20	61	100					50			50	70	50	92	30	89	20	80	10	26	10	40	20						------
3	6	61	200						20	70	70		130	92	30	56	10	43	*	73	*	50							------
3	20	61	200			40		20		20	110	70	70										110						------
4	3	61	100			20		20			40		50																------
4	17	61	700	60	20	310		120		100	40		40										40						------
5	1	61	2300			90		340		1720	160	160	50	80	90	26	10	84	*	58	*	*							-19--
5	22	61	900			310		60		440	120	60	120	80	60	58	20	26	10	82	*	20							--9--
6	5	61	7700	40		700		310		3400	3230	350	250	80	80	26	10	57	*	58	*	*		10					4-963
6	19	61	3300	20		380		1140		400	1390	510	160	80	40	18	20	38	10	58	10	40							-1963
7	3	61	2500	20		450		340		860	870	340	160	80	30	58	20	26	20	56	10	30	20						8496-
8	1	61	2500			250		450	20	830	990	100	150	80	20	26	10	82	10	68	10	50							4196-
8	15	61	8100	40	930	1160		250	60	2610	3040	290	190										40		1	2			24923
9	5	61	4100	90		830		180	20	1500	1500	1560	470	38	30	84	30	26	20	58	10	20			47				48923
9	15	61	1300		40	60		60		270	890	80	40	26	20	18	10	53	10	68	10	50				10			---63

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE LOUISIANA

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER RED RIVER BELOW DENISON

STATION LOCATION RED RIVER AT ALEXANDRIA, LOUISIANA 42

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	3	60	25.0	7.9	7.9	3.5	-	2.1	8.6	.1	397	163	333	20	103	116	-	1086	3500
10	10	60	25.0	7.3	7.6	1.3	22	1.7	5.9	.1	111	80	133	20	128	66	-	362	3200
10	17	60	24.0	7.0	7.8	1.2	-	1.9	6.4	.1	76	88	129	20	710	37	-	304	-
10	18	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11000
10	24	60	21.0	8.8	7.9	1.9	16	2.0	6.3	.1	95	103	163	20	160	49	-	354	5700
10	31	60	18.0	6.5	7.6	1.6	36	.6	4.2	.1	311	103	350	10	780	226	-	1033	16000
11	7	60	17.0	8.1	7.7	1.7	29	2.0	7.3	.1	313	91	340	20	780	217	-	1018	42000
11	14	60	15.0	8.6	7.3	1.4	21	1.9	9.2	.1	205	72	206	20	350	46	-	692	21000
11	28	60	18.0	8.3	7.7	-	24	3.1	8.2	.1	216	74	205	20	120	120	-	678	19000
12	5	60	13.0	10.3	7.8	-	17	1.4	7.7	.1	242	94	235	20	20	120	.1	752	7400
12	12	60	10.0	8.9	7.6	-	48	1.0	8.9	.2	99	65	130	30	350	50	.1	346	30000
1	9	61	18.0	9.8	7.6	-	32	3.2	9.7	.1	45	44	75	50	640	22	.1	197	16000
1	16	61	9.0	9.5	7.5	-	29	3.6	10.0	.1	59	44	80	50	610	31	.1	223	22000
1	23	61	9.0	10.5	7.6	-	24	3.2	8.6	.1	73	52	113	50	245	43	.1	275	22000
1	30	61	4.0	12.0	7.7	-	28	3.3	9.0	.1	76	51	109	50	180	45	.1	281	11000
2	6	61	9.0	11.2	7.6	-	26	3.0	8.9	.1	99	61	125	50	305	61	.1	367	26000
2	13	61	10.0	10.5	7.5	2.0	25	3.0	8.7	.1	90	61	122	40	190	55	.1	338	19000
2	20	61	15.0	8.3	7.5	1.6	33	5.3	10.4	.2	41	55	83	60	375	28	.3	196	6700
2	27	61	13.0	8.8	7.7	-	32	3.6	10.5	.2	42	50	82	80	1050	25	.1	194	3200
3	6	61	12.0	8.6	7.6	1.3	24	3.8	9.5	.1	47	45	74	50	430	23	.2	192	4200
3	13	61	15.0	8.8	7.7	-	23	3.0	8.4	.1	74	50	98	40	510	39	.1	266	6400
3	20	61	18.0	7.6	7.4	2.2	31	4.1	-	.1	37	41	73	60	570	20	.3	167	15000
3	27	61	18.0	8.0	7.6	-	25	3.8	10.4	.1	41	48	72	60	300	18	.3	183	5600
4	3	61	18.0	6.8	7.8	1.5	42	5.0	-	.1	30	55	79	80	640	16	.3	165	3000
4	10	61	17.0	7.8	9.0	-	54	4.1	11.0	.1	39	49	83	80	1000	22	.3	188	8100
4	17	61	18.0	8.5	7.8	-	32	4.0	9.8	.1	74	52	100	60	540	45	.2	280	9200
5	1	61	23.0	7.3	7.8	1.3	33	3.0	8.7	.1	69	73	121	40	490	44	.2	285	7500
5	22	61	26.0	6.5	7.7	1.0	23	2.7	8.1	.1	25	59	86	50	310	18	.3	155	5600
6	5	61	28.0	7.3	7.5	1.4	15	.8	4.4	.0	141	101	204	20	86	96	.2	528	2300
6	19	61	24.0	6.8	7.8	1.1	7	1.9	4.2	.1	174	104	226	20	305	109	.3	609	2000
7	10	61	29.0	-	7.7	-	20	-	7.9	.0	99	73	138	30	162	47	.2	355	1200
9	11	61	29.0	6.9	8.0	2.7	43	2.6	7.5	.1	106	158	215	20	41	58	.2	470	1600
9	18	61	24.0	6.1	7.4	1.7	47	4.1	11.0	.1	90	53	98	50	245	31	.2	311	10000
9	25	61	28.0	6.3	7.4	1.0	47	3.6	9.6	.1	76	60	109	40	410	45	.2	298	6700

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Alexandria, Louisiana
Operated by U.S. Corps of Engineers

STATE Louisiana

MAJOR BASIN Southwest-Lower Mississippi River

MINOR BASIN Lower Red River below Denison

STATION LOCATION Red River at Alexandria, Louisiana

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	6.000	32.400	9.800	41.800	40.000	68.700	106.000	24.500	12.700	28.000	36.800	9.600
2	6.800	31.600	9.100	44.400	38.000	65.200	117.000	23.600	12.300	27.400	33.400	9.000
3	7.800	30.100	8.800	47.600	37.000	60.800	126.000	22.200	11.400	26.400	29.400	8.600
4	8.900	26.800	8.600	55.400	35.700	55.900	132.000	20.900	10.300	24.800	25.700	8.000
5	9.900	24.400	8.200	62.700	34.500	51.800	133.000	19.900	9.120	22.900	22.800	7.400
6	10.600	22.300	8.200	65.700	32.800	48.700	133.000	18.700	8.810	21.500	20.900	7.000
7	10.700	20.200	8.200	69.000	31.700	46.700	127.000	18.000	8.480	20.200	19.000	6.800
8	10.500	17.500	10.800	78.500	32.500	45.800	116.000	17.900	7.950	20.000	17.800	6.500
9	9.900	15.600	16.400	81.900	31.700	45.300	111.000	18.100	6.900	20.100	16.300	6.400
10	9.300	15.300	34.900	80.500	29.900	47.000	101.000	21.300	5.880	19.900	14.600	6.400
11	8.800	15.600	56.000	77.100	27.300	48.500	90.800	40.600	5.870	19.600	13.200	6.700
12	9.000	15.200	76.000	72.500	24.900	49.400	83.800	56.000	6.450	19.600	12.400	8.300
13	11.100	14.300	92.200	70.000	24.000	49.000	82.400	61.400	7.650	19.000	11.900	14.000
14	13.600	13.400	103.000	69.900	25.800	48.800	81.000	61.400	9.070	18.200	11.100	24.700
15	14.200	12.500	114.000	67.800	29.000	47.500	79.500	60.100	10.200	18.000	10.600	31.600
16	13.100	11.800	121.000	64.500	30.800	46.300	75.400	56.400	11.000	18.000	10.500	32.200
17	12.500	11.600	122.000	61.000	31.800	51.400	71.600	52.400	13.500	18.900	10.500	30.500
18	10.600	12.200	118.000	57.300	40.500	59.600	66.600	47.100	17.100	21.400	10.600	29.100
19	9.600	12.600	108.000	54.400	43.000	61.800	62.300	41.300	21.500	27.400	10.600	29.400
20	8.500	12.600	98.100	50.800	44.300	61.900	57.500	34.800	26.400	40.700	10.800	32.900
21	7.700	12.500	86.400	48.200	48.800	59.700	52.400	28.400	30.600	45.000	12.000	33.800
22	7.300	13.000	75.200	45.200	55.700	57.000	45.500	23.600	30.200	45.000	13.700	32.700
23	7.100	13.500	65.300	43.400	63.000	54.200	40.800	19.400	28.900	42.200	15.400	29.600
24	7.100	14.200	56.700	42.400	67.900	52.000	36.800	16.900	26.000	37.800	17.100	26.100
25	7.100	14.200	49.700	45.600	71.400	50.200	33.500	14.300	24.000	33.000	17.200	22.900
26	7.100	14.000	44.200	49.800	72.400	47.900	31.600	12.300	25.100	31.800	16.000	19.100
27	11.600	13.500	40.300	50.500	72.400	45.500	30.100	12.600	28.200	29.800	14.600	15.700
28	21.000	12.800	37.500	50.000	71.300	45.000	28.400	13.100	28.900	29.300	14.000	13.100
29	28.100	11.800	35.800	47.800		52.600	27.100	12.600	28.800	31.800	13.200	11.500
30	31.300	10.800	36.400	45.500		67.200	25.700	12.400	28.300	37.100	12.100	10.300
31	32.300		37.000	42.400		87.400		12.500		38.700	10.700	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE ARKANSAS

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER RED RIVER BELOW DENISON

STATION LOCATION RED RIVER AT

INDEX, ARKANSAS 43

Date Sample Taken			Radioactivity in Water									Radioactivity in Plankton (dry)				Radioactivity in Water		
			Date of Determination		Alpha			Beta			Date of Determination		Gross Activity		Gross Activity		
					Suspended	Dissolved	Total	Suspended	Dissolved	Total			Alpha	Beta	Suspended	Dissolved	Total
Mo.	Day	Year	Month	Day	µµc/l	µµc/l	µµc/l	µµc/l	µµc/l	µµc/l	Mo.	Day	µµc/g	µµc/g	µµc/l	µµc/l	µµc/l
10	10	60*	11	7	-	-	-	0	0	0							
10	24	60*	11	7	12	7	19	0	0	0							
11	28	60*	12	7	1	4	5	0	0	0							
12	12	60*	1	20	7	4	11	11	3	14							
1	30	61*	2	15	2	2	4	0	5	5							
2	27	61*	3	8	1	0	1	0	0	0							
3	27	61*	4	11	2	1	3	3	0	3							
4	24	61*	5	4	9	0	9	0	0	0							
5	29	61*	6	9	0	0	0	5	0	5							
6	26	61*	7	25	2	0	2	0	0	0							
7	31	61*	11	11	2	3	5	1	0	1							
8	21	61*	9	14	0	4	4	0	13	13							
9	11	61	10	11	0	4	4	15	8	23							
9	18	61	10	20	4	1	5	16	10	26							
9	25	61	10	2	-	-	-	33	0	33							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE ARKANSAS

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER RED RIVER BELOW DENISON

STATION LOCATION RED RIVER AT

INDEX, ARKANSAS 43

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	3	60	8200	1020		2040		240	20	1600	3300			26	40	38	30	65	10	82	*	20	380	10	36				48723
10	17	60	3300	220	160	660		70	20	530	1650	420	440	56	40	26	10	30	*	65	*	20	260	10	1				488-3
11	7	60	4600	110	20	630		140		250	3500	70	340	38	60	97	10	26	*	65	*	30	50		1	1			4-8-3
11	21	60	8400			2280		180	50	270	5630		310	38	20	97	10	11	10	57	10	10		10	1				--863
12	5	60	4300	20		2100		710		340	1090	380	850	38	60	26	10	80	10	97	10	10	20		5				84823
1	9	61						20					50										20			1	1		-----
1	23	61	1200	20	20	110		600		220	220		160	80	30	38	30	56	*	55	*	40					2		---3-
2	6	61	1500	180		220		650		310	110	20	200	38	20	82	10	51	10	92	10	60		10					--833
2	20	61	1100	90		180		540	50		220	20	200	92	20	51	10	88	10	80	10	60							---3-
3	6	61	3100			1030		1650	90	130	160	50	200	80	30	47	30	92	10	56	10	30	20						-183-
3	20	61	3900			430		1220	20	1440	820	1400	130	82	70	92	10	80	*	26	*	20							71933
4	3	61	200	20				50		50	70		200																-----
4	17	61	4700			2070		290		1640	660	60	210	80	50	26	10	82	10	56	10	30							4191-
5	1	61	10600	60	20	2630		490	20	4580	2770	2480	540	80	80	26	10	58	10	84	*	*	20		5				71923
5	15	61	1000	70		90		200	50	510	130	360	380	80	80	58	10	92	*	56	*	10							--9--
6	5	61	1400			220		510		270	360	110	70	80	50	58	20	26	*	53	*	30							-192-
6	19	61	8900	20		3350		520	440	2610	2010	990	620	38	20	23	10	84	10	26	10	50							488-7
7	3	61	6700			2150		290	20	1680	2570	770	830	67	10	23	10	71	10	38	10	60			14				4-963
7	17	61	1700			250		90		740	670	360	800																--9-3
8	7	61	6700	100	1140	1370		170	20	540	3910	210	680	38	20	26	10	97	10	46	10	60		10	25				98723
8	21	61	6700	20	130	850		370		910	4390	60	460	97	20	18	10	11	10	53	10	60			6				--763
9	4	61	5700	20	640	770		330	40	770	3150	60	310	56	20	38	10	26	10	18	*	50			44		3		-2763
9	18	61	900			100		60		100	580	60	460																---63

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE ARKANSAS

MAJOR BASIN SOUTHWEST LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER RED RIVER BELOW DENISON

STATION LOCATION RED RIVER AT INDEX, ARKANSAS

43

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	3	60	25.0	7.4	7.9	2.0	18	3.4	7.8	-	78	97	194	80	85	-	-	268	160
10	10	60	22.0	6.8	7.6	2.0	18	4.7	10.7	-	78	88	160	50	350	-	-	311	3400
10	17	60	23.0	7.8	8.1	2.4	10	2.7	6.7	-	150	120	244	40	105	-	-	459	160
10	24	60	20.0	6.4	7.6	1.0	-	4.2	8.2	-	246	111	390	25	300	-	-	1142	1400
10	30	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600
10	31	60	19.0	8.0	7.9	1.8	45	2.7	8.7	-	240	96	408	20	260	-	-	1176	-
11	7	60	15.0	9.4	7.8	1.6	-	2.2	4.7	-	244	94	380	10	145	-	-	1106	*200
11	14	60	15.0	9.8	7.9	1.8	28	2.7	5.8	-	190	100	340	45	110	-	-	977	1500
11	21	60	15.0	9.6	8.0	4.4	30	1.8	6.2	-	223	100	364	30	70	-	-	728	1800
11	28	60	17.0	9.2	8.1	3.8	25	2.5	6.7	-	166	123	332	20	65	-	-	950	20
12	5	60	13.0	10.0	8.0	2.8	30	1.8	4.7	-	200	141	354	10	25	-	-	687	60
12	12	60	8.0	9.6	8.1	4.0	-	4.5	10.7	-	64	56	92	80	600	-	-	-	16000
1	9	61	7.0	11.2	7.8	4.2	14	2.2	6.4	-	110	75	200	45	145	-	-	610	1800
1	16	61	9.0	11.0	7.9	2.6	-	1.6	4.7	-	170	100	300	10	82	-	-	566	1300
1	23	61	5.0	12.0	8.1	3.0	21	1.4	4.7	-	215	115	356	10	55	-	-	901	80
1	30	61	3.0	12.8	8.3	4.2	26	1.9	3.3	-	280	111	408	10	55	-	-	1200	220
2	6	61	6.0	11.6	8.0	3.4	29	1.8	4.2	-	205	124	382	0	37	-	-	1027	100
2	13	61	10.0	10.4	7.9	2.8	13	2.7	8.7	-	70	85	170	130	160	-	-	433	4000
2	20	61	12.0	9.8	7.9	2.0	17	3.3	6.7	-	100	140	246	35	155	-	-	425	3800
2	27	61	13.0	10.0	7.8	2.2	17	2.7	8.3	-	60	70	140	75	150	-	-	297	14000
3	6	61	20.0	9.2	7.9	1.8	22	2.7	6.7	-	135	110	250	25	37	-	-	636	2000
3	13	61	18.0	9.0	7.9	1.2	17	3.8	1.8	-	90	85	196	50	180	-	-	527	4400
3	20	61	16.0	9.4	7.9	1.6	18	3.8	-	-	57	112	172	50	55	-	-	511	380
3	27	61	19.0	8.6	7.8	2.6	14	4.2	10.7	-	44	112	158	69	125	-	-	250	4000
4	3	61	17.0	8.2	7.8	3.0	17	4.7	11.1	-	35	57	94	180	650	-	-	197	42000
4	10	61	16.0	9.2	7.9	1.4	30	2.2	4.7	-	160	97	288	60	215	-	-	759	4000
4	17	61	16.0	9.4	8.0	1.6	22	2.7	4.7	-	210	98	290	20	120	-	-	897	1100
4	24	61	21.0	7.8	7.9	-	34	2.2	4.7	-	180	110	330	15	55	-	-	1030	*2000
5	1	61	26.0	7.6	7.8	-	24	2.7	3.7	-	140	143	300	15	30	-	-	707	140
5	8	61	25.0	6.6	7.7	1.6	45	4.7	10.7	-	64	74	160	90	450	-	-	496	1300
5	15	61	26.0	7.2	7.7	.8	22	4.7	9.1	-	50	72	140	50	200	-	-	297	150
5	22	61	25.0	7.4	8.0	-	29	2.7	4.7	-	113	132	260	30	58	-	-	708	40
5	29	61	23.0	7.8	8.0	1.4	33	2.7	8.2	-	107	120	118	20	180	-	-	717	*20
6	5	61	26.0	7.0	7.9	1.8	21	2.7	8.2	-	45	107	166	40	150	-	-	305	-
6	12	61	29.0	6.2	7.8	2.2	33	1.8	4.2	-	105	100	246	20	200	-	-	683	420
6	19	61	23.0	7.6	8.0	2.8	37	4.2	6.7	-	153	130	294	30	70	-	-	720	160
6	26	61	23.0	6.6	7.8	3.2	36	4.7	10.7	-	70	95	220	40	210	-	-	594	1300
7	3	61	29.0	6.6	8.1	2.6	105	2.2	4.2	-	128	135	282	15	35	-	-	788	*20
7	10	61	28.0	9.2	8.1	8.0	41	4.2	6.7	-	158	160	340	20	25	-	-	806	200

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE ARKANSAS

MAJOR BASIN SOUTHWEST LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER RED RIVER BELOW DENISON

STATION LOCATION RED RIVER AT INDEX, ARKANSAS

43

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	17	61	25.0	5.6	7.6	1.4	30	4.7	10.7	-	115	70	230	25	270	-	-	624	2400
7	24	61	28.0	6.6	7.9	1.6	18	4.7	9.1	-	70	90	164	70	210	-	-	394	2000
7	31	61	31.0	6.4	7.8	2.8	18	2.7	8.7	-	118	92	220	40	160	-	-	700	73
8	7	61	30.0	6.4	8.1	1.4	23	2.2	4.7	-	160	136	326	40	51	-	-	888	100
8	14	61	29.0	6.8	8.1	3.8	44	2.7	4.7	-	215	140	392	20	27	-	-	1100	-
8	21	61	27.0	7.2	8.0	1.4	18	4.2	8.3	-	110	100	232	20	150	-	-	643	-
8	28	61	28.0	7.0	8.0	1.6	20	2.7	6.7	-	118	135	270	35	50	-	-	654	-
9	4	61	28.0	7.0	8.2	3.0	27	4.2	6.7	-	180	150	390	15	35	-	-	1101	-
9	11	61	27.5	7.0	8.0	2.2	22	3.8	8.7	-	194	162	430	20	44	-	-	1195	150
9	18	61	22.0	6.6	7.6	2.4	15	4.7	10.7	-	70	41	170	70	300	-	-	409	560
9	25	61	25.0	7.4	8.0	1.4	16	1.8	8.7	-	150	96	276	20	100	-	-	825	140

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Index, Arkansas
Operated by U.S. Geological Survey

STATE	Arkansas
MAJOR BASIN	Southwest Lower Mississippi River
MINOR BASIN	Lower Red River below Denison
STATION LOCATION	Red River at Index, Arkansas

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	6.010	22.800	3.190	13.800	7.400	9.300	61.000	4.350	5.600	3.190	5.600	2.800
2	5.600	21.800	2.680	25.000	6.660	7.920	60.000	4.050	4.660	3.900	5.200	2.470
3	4.050	18.600	2.460	29.400	6.010	6.660	51.200	4.050	3.900	4.500	4.500	2.680
4	3.320	14.200	2.680	25.200	6.010	6.900	40.400	48.300	3.600	4.500	3.750	3.530
5	3.390	10.900	2.860	19.100	5.600	7.400	32.600	5.800	3.260	4.500	3.190	3.600
6	3.390	8.440	4.350	15.400	5.010	7.920	28.800	6.440	3.900	3.750	3.900	3.750
7	4.040	6.660	13.200	13.400	4.050	7.920	25.800	12.700	4.500	2.800	4.500	3.750
8	11.600	5.800	25.100	12.300	4.500	8.720	20.600	35.200	4.830	2.620	4.350	3.320
9	13.400	5.200	39.000	12.300	5.200	7.660	18.600	44.400	5.200	3.390	4.050	2.570
10	11.300	4.200	45.000	12.700	8.180	7.660	20.600	37.400	4.830	3.260	3.900	2.170
11	8.440	3.750	50.900	13.400	11.300	9.600	21.200	27.600	5.800	4.660	3.390	2.170
12	5.800	4.350	63.000	13.000	11.900	9.920	18.100	18.600	11.300	5.400	3.000	2.800
13	4.200	4.500	68.000	11.300	11.300	11.300	16.700	12.700	11.600	5.010	3.530	3.600
14	3.190	4.830	58.000	9.300	9.600	10.600	15.900	9.300	8.720	4.350	3.900	3.750
15	2.680	5.600	38.000	8.720	7.660	8.180	16.700	7.400	6.660	4.050	4.050	4.500
16	3.060	5.600	25.200	8.440	6.010	5.600	16.700	6.220	4.830	10.400	4.050	11.600
17	3.750	5.010	19.600	8.180	5.200	4.500	15.900	5.600	4.350	22.800	4.350	16.300
18	4.200	5.200	17.200	8.180	5.600	4.660	13.000	4.830	5.200	25.800	4.500	15.000
19	4.050	6.010	14.600	8.440	6.440	5.400	9.600	4.350	5.010	19.600	4.350	13.000
20	3.320	6.440	13.000	8.180	7.920	5.800	7.140	3.750	4.500	13.400	6.010	10.600
21	2.680	6.900	11.900	8.180	16.200	7.660	6.220	4.200	4.350	9.600	6.010	7.920
22	2.300	6.440	10.600	7.920	23.400	9.000	6.440	4.660	3.750	7.660	5.400	5.400
23	13.100	5.800	8.440	7.660	28.200	7.660	5.800	5.400	3.390	6.660	5.400	4.050
24	27.600	4.830	6.900	7.660	26.400	5.600	5.400	6.440	3.190	7.140	4.500	3.900
25	28.200	3.750	6.220	7.400	20.100	4.830	5.800	6.440	4.660	8.720	3.260	3.900
26	28.200	3.320	5.800	6.660	14.600	4.660	5.800	6.660	7.140	13.800	2.740	3.900
27	29.400	4.200	5.400	6.220	11.600	7.660	5.010	7.660	7.660	15.400	3.190	4.200
28	30.000	4.500	5.400	6.440	10.200	18.600	4.050	7.660	7.400	13.000	3.190	4.050
29	30.000	3.750	5.010	7.400		22.300	3.900	5.600	5.800	10.600	2.570	3.190
30	30.000	3.120	5.010	7.920		30.000	4.500	4.830	3.750	8.180	2.470	2.860
31	27.600		7.140	7.920		43.600		5.200		6.660	2.740	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE TEXAS

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER RED RIVER BELOW DENISON

STATION LOCATION RED RIVER AT

DENISON, TEXAS 44

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	24	60*	11	7	0	11	11	0	0	0								
11	28	60*	12	7	9	45	54	24	9	33								
12	27	60*	1	20	0	10	10	0	0	0								
1	30	61*	2	8	0	2	2	0	0	0								
2	20	61*	3	23	1	1	2	0	0	0								
3	27	61*	4	7	0	0	0	0	0	0								
4	24	61*	5	8	0	2	2	0	0	0								
5	29	61*	6	6	0	16	16	0	0	0								
6	26	61*	7	13	0	6	6	0	0	0								
7	31	61*	8	25	0	1	1	0	0	0								
8	28	61*	9	15	0	1	1	0	0	0								
9	5	61	9	28	-	-	-	0	0	0								
9	11	61	10	2	0	0	0	0	2	2								
9	18	61	10	30	-	-	-	11	27	38								
9	25	61	10	5	-	-	-	12	28	40								

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE TEXAS

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER RED RIVER BELOW DENISON

STATION LOCATION RED RIVER AT DENISON, TEXAS

44

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	17	60	1600	70		180				110	1270	130	250	38	80	26	*	58	*	56	*	10			2				----3
11	7	60	2800		90	270		90		710	1670	360	250	38	70	57	*	26	*	18	*	20	130	30	1				4---3
11	21	60	1300	20		70		240		240	770		110	38	90	26	*						310			6			---33
12	5	60	1400		20	670				50	690	50	290	88	40	56	*					10			1				--8-3
12	19	60	1700			40		130		130	1410	40	90	38	90	84	*	26	*			10	20			2			----3
1	4	61	3900			1120		340	70	50	2280	20	130	38	80	80	20	82	*	92	*	10		10	8	12			--8-3
1	11	61	2700	40		760		290	20	70	1520	70	380	38	90	82	10	80	*	92	*			90	18	23			-18-3
2	6	61	700	90		220		70	50		270		220	38	60	58	20	92	10	93	10	10		20	23	7			--8-3
3	6	61	1100			600		360	20	90	70	50	70	38	20	80	10	93	10	92	10	50			3	12			--83-
3	20	61	1500			580		690		130	110	90	90	38	50	80	10	92	10	71	10	30	160		21	24			-1-3-
4	11	61	1800			1360		110		40	270		200	38	30	80	30	26	10	56	*	30			2	16		1	--823
5	1	61	3000	100		2150				390	310	40	190	80	80	26	10	38	10	80	*	50	20	10		7			--813
5	15	61	3000	580		1560		90		220	510	70	1010	80	60	38	10	26	10	92	*	20		10	6	3			-88-3
6	5	61	700			200		40		50	400	110	600	80	40	38	30	26	*	31	*	20		10					----3
6	19	61	900			220		540	20		90		200	38	50	80	20	26	10	56	*	30		20	3				-1---
7	3	61	1300			680		190		210	230	80	350	38	30	49	20	80	10	46	10	30		10	3	5			-8-2-
7	17	61	800			440		190		100	100		20	38	40	80	10	70	*	65	*	40			9	1			--8--
8	7	61	700		20	270		120		60	190	20	60	38	50	95	10	92	*	26	*	40							--8--
8	21	61	400	20		60		50		20	290	20		38	60	97	10	26	*	92	*	20							----3
9	5	61									20																		-----
9	18	61	200	20		70		20			90	20													9	1			-----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE TEXAS

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER RED RIVER BELOW DENISON

STATION LOCATION RED RIVER AT DENISON, TEXAS

44

DATE OF SAMPLE: BEGINNING MONTH	DAY	YEAR	END MONTH	DAY	GALLONS FILTERED	EXTRACTABLES: TOTAL	CHLORO-FORM	ALCOHOL	CHLOROFORM EXTRACTABLES: ETHER INSOLUBLES	WATER SOLUBLES	NEUTRALS: TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	3	60	10	10	4740	280	64	216	2	18	17	2	1	14	0	7	7	2	11
11	7	60	11	21	7300	195	46	149	1	13	10	0	1	9	0	5	5	1	11
12	5	60	12	19	4850	291	52	239	1	12	15	0	0	13	2	6	3	2	13
1	12	61	1	20	5210	209	60	149	2	16	13	1	1	11	0	7	5	2	15
2	6	61	2	13	5040	250	54	196	2	15	12	0	0	11	1	5	4	2	14
3	8	61	3	16	5350	210	49	161	1	12	13	1	1	10	1	6	4	2	11
4	3	61	4	10	5070	254	73	181	-	-	-	-	-	-	-	-	-	-	-
5	1	61	5	9	5680	248	92	156	-	-	-	-	-	-	-	-	-	-	-
6	5	61	6	12	5020	291	108	183	-	-	-	-	-	-	-	-	-	-	-
6	5	61		*	15770	264	91	173	5	26	19	2	1	16	0	7	14	2	18
7	3	61	7	11	5460	251	71	180	-	-	-	-	-	-	-	-	-	-	-
8	7	61	8	14	4960	237	81	156	-	-	-	-	-	-	-	-	-	-	-
9	7	61	9	15	5190	207	44	163	-	-	-	-	-	-	-	-	-	-	-
9	7	61		*	15610	231	65	166	4	16	16	2	1	12	1	7	7	1	14

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE TEXAS
MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER
MINOR BASIN LOWER RED RIVER BELOW DENISON
STATION LOCATION RED RIVER AT
DENISON, TEXAS 44

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l
10	5	60	24.4	-	7.6	-	-	-	-	-
10	10	60	-	-	-	-	-	-	-	-
10	17	60	-	-	-	-	-	-	-	-
10	19	60	23.3	-	7.6	-	-	-	-	-
10	24	60	-	-	-	-	-	-	-	-
10	26	60	21.7	-	7.8	-	-	-	-	-
10	31	60	-	-	-	-	-	-	-	-
11	7	60	-	-	-	-	-	-	-	-
11	9	60	17.8	-	7.6	-	-	-	-	-
11	14	60	-	-	-	-	-	-	-	-
11	16	60	16.7	-	7.6	-	-	-	-	-
11	21	60	16.7	-	7.6	-	-	-	-	-
11	28	60	-	-	-	-	-	-	-	-
12	5	60	-	-	-	-	-	-	-	-
12	12	60	-	-	-	-	-	-	-	-
12	14	60	11.7	-	7.6	-	-	-	-	-
12	19	60	-	-	-	-	-	-	-	-
12	27	60	-	-	-	-	-	-	-	-
1	3	61	-	-	-	-	-	-	-	-
1	4	61	8.9	-	7.6	-	-	-	-	-
1	9	61	-	-	-	-	-	-	-	-
1	16	61	-	-	-	-	-	-	-	-
1	23	61	-	-	-	-	-	-	-	-
1	25	61	7.2	-	7.6	-	-	-	-	-
1	30	61	-	-	-	-	-	-	-	-
2	1	61	6.7	-	7.8	-	-	-	-	-
2	6	61	-	-	-	-	-	-	-	-
2	8	61	6.7	-	7.8	-	-	-	-	-
2	20	61	-	-	-	-	-	-	-	-
3	1	61	8.3	-	7.8	-	-	-	-	-
3	7	61	9.4	-	8.0	-	-	-	-	-
3	15	61	11.1	-	8.2	-	-	-	-	-
3	20	61	-	-	-	-	-	-	-	-
3	21	61	11.7	-	8.0	-	-	-	-	-
3	27	61	-	-	-	-	-	-	-	-
3	28	61	12.2	-	8.0	-	-	-	-	-

MONTH	DAY	YEAR	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	5	60	-	116	420	-	5	-	-	-	-
10	10	60	399	-	-	5	-	300	.0	1230	-
10	17	60	405	-	-	5	-	300	.0	1230	-
10	19	60	-	110	420	-	5	-	-	-	-
10	24	60	396	-	-	5	-	375	.0	1190	-
10	26	60	-	104	470	-	10	-	-	-	-
10	31	60	427	-	-	5	-	325	.0	1240	-
11	7	60	429	-	-	10	-	305	.0	1240	-
11	9	60	-	102	440	-	5	-	-	-	-
11	14	60	416	-	-	10	-	255	.0	1330	-
11	16	60	-	98	460	-	10	-	-	-	-
11	21	60	417	98	460	5	10	300	.0	1210	-
11	28	60	417	-	-	10	5	305	.1	1230	-
12	5	60	419	-	-	5	-	300	.0	1210	-
12	12	60	424	-	-	0	-	315	.0	1230	-
12	14	60	-	100	440	-	5	-	-	-	-
12	19	60	-	-	-	0	-	300	.0	1200	-
12	27	60	414	-	-	0	-	315	.0	1220	-
1	3	61	402	-	-	-	-	280	.0	1210	-
1	4	61	-	102	-	-	-	-	-	-	-
1	9	61	434	-	-	-	-	295	.0	-	-
1	16	61	441	-	-	0	-	270	.0	1290	-
1	23	61	405	-	-	0	-	290	.0	-	-
1	25	61	-	108	430	-	5	-	-	-	*3
1	30	61	387	-	-	0	-	290	.0	1200	-
2	1	61	-	112	400	-	5	-	-	-	3
2	6	61	385	-	-	0	-	283	.0	1218	-
2	8	61	-	108	410	-	5	-	-	-	*3
2	20	61	412	-	-	0	-	310	.0	1271	-
3	1	61	-	114	420	-	5	-	-	-	*3
3	7	61	-	116	430	-	5	-	-	-	*3
3	15	61	-	116	420	-	5	-	-	-	*33
3	20	61	-	405	-	0	-	290	.0	1218	-
3	21	61	-	116	430	-	5	-	-	-	3
3	27	61	410	-	-	0	-	300	.0	1244	-
3	28	61	-	116	440	-	5	-	-	-	3

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE TEXAS
MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER
MINOR BASIN LOWER RED RIVER BELOW DENISON
STATION LOCATION RED RIVER AT
DENISON, TEXAS 44

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
4	3	61	-	-	-	-	-	-	-	-	435	-	-	5	-	305	.0	1244	-
4	4	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33
4	5	61	12.8	-	8.0	-	-	-	-	-	-	116	450	-	5	-	-	-	-
4	12	61	12.8	-	8.0	-	-	-	-	-	-	118	440	-	5	-	-	-	-
4	18	61	-	-	-	-	-	-	-	-	-	-	-	5	-	305	.2	1269	*30
4	19	61	13.9	-	8.0	-	-	-	-	-	-	126	450	-	0	-	-	-	-
4	24	61	-	-	-	-	-	-	-	-	470	-	-	5	-	300	.0	1286	-
4	26	61	15.0	-	8.0	-	-	-	-	-	-	122	470	-	0	-	-	-	10
5	1	61	-	-	-	-	-	-	-	-	450	-	-	7	-	285	.0	1422	-
5	3	61	16.1	-	8.0	-	-	-	-	-	-	124	460	-	0	-	-	-	*3
5	8	61	-	-	-	-	-	-	-	-	454	122	488	7	-	315	.0	1336	-
5	10	61	-	-	-	-	-	-	-	-	445	-	-	7	-	305	.1	1268	-
5	15	61	-	-	-	-	-	-	-	-	438	-	-	8	-	300	.0	1276	-
5	16	61	18.9	-	8.0	-	-	-	-	-	-	122	460	-	0	-	-	-	33
5	22	61	19.4	-	8.2	-	-	-	-	-	-	128	470	-	0	-	-	-	31
6	5	61	-	-	-	-	-	-	-	-	441	-	-	10	-	325	.0	1348	-
6	6	61	19.4	-	7.8	-	-	-	-	-	-	114	460	-	0	-	-	-	-
6	12	61	-	-	-	-	-	-	-	-	430	-	-	5	-	313	.0	1348	-
6	14	61	21.1	-	7.6	-	-	-	-	-	-	122	450	-	0	-	-	-	100
6	19	61	-	-	-	-	-	-	-	-	430	-	-	0	-	300	.0	1311	-
6	21	61	21.7	-	7.8	-	-	-	-	-	-	120	440	-	0	-	-	-	-
6	26	61	-	-	-	-	-	-	-	-	434	-	-	5	-	350	.0	1311	-
6	29	61	25.6	-	7.6	-	-	-	-	-	-	122	490	-	0	-	-	-	-
7	10	61	-	-	-	-	-	-	-	-	449	-	-	5	-	325	.0	1308	-
7	12	61	20.6	-	7.6	-	-	-	-	-	-	118	460	-	0	-	-	-	36
7	17	61	-	-	-	-	-	-	-	-	452	-	-	5	-	300	.0	1316	-
7	24	61	-	-	-	-	-	-	-	-	447	-	-	5	-	300	.0	1317	-
7	25	61	23.3	-	7.6	-	-	-	-	-	-	120	490	-	0	-	-	-	-
7	31	61	-	-	-	-	-	-	-	-	450	-	-	5	-	310	.0	1297	-
8	1	61	22.7	-	7.8	-	-	-	-	-	-	122	450	-	0	-	-	-	3
8	7	61	-	-	-	-	-	-	-	-	450	-	-	5	-	315	.1	1337	-
8	8	61	21.6	-	7.6	-	-	-	-	-	-	118	500	-	0	-	-	-	*3
8	14	61	-	-	-	-	-	-	-	-	450		-	5	-	285	.1	1345	-
8	15	61	22.2	-	7.4	-	-	-	-	-	-	130	570	-	0	-	-	-	-
8	21	61	-	-	-	-	-	-	-	-	455	120	468	5	0	275	.1	1347	-
8	22	61	23.3	-	7.4	-	-	-	-	-	-	126	470	-	0	-	-	-	10

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE TEXAS

MAJOR BASIN SOUTHWEST-LOWER MISSISSIPPI RIVER

MINOR BASIN LOWER RED RIVER BELOW DENISON

STATION LOCATION RED RIVER AT

DENISON, TEXAS 44

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
8	28	61	-	-	-	-	-	-	-	-	455	-	-	5	-	315	.1	1355	7
8	29	61	23.3	-	7.4	-	-	-	-	-	-	128	540	-	5	-	-	-	-
9	5	61	22.2	-	7.4	-	-	-	-	-	435	134	530	5	5	315	.1	1317	-
9	7	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*3
9	11	61	23.3	-	7.4	-	-	-	-	-	-	126	540	-	0	-	-	-	-
9	12	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*3
9	18	61	-	-	-	-	-	-	-	-	460	-	-	5	-	325	.0	1349	7
9	25	61	22.2	-	7.8	-	-	-	-	-	-	110	490	-	5	-	-	-	-
9	26	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Colbert, Oklahoma
Operated by U.S. Corps of Engineers

STATE Texas

MAJOR BASIN Southwest-Lower Mississippi River

MINOR BASIN Lower Red River below Denison

STATION LOCATION Red River at Denison, Texas

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	.340	9.360	3.370	3.470	2.880	4.170	9.250	1.440	3.690	.510	3.890	3.270
2	.020	3.980	3.290	4.280	2.420	3.370	9.340	2.800	3.410	.190	3.830	2.600
3	3.440	3.960	.040	4.870	2.070	3.540	9.960	2.860	.600	4.590	3.190	.020
4	3.310	3.370	.040	4.610	.770	.900	9.860	3.790	.459	.300	3.130	.020
5	3.280	.080	3.680	6.210	.480	1.010	10.100	3.620	2.920	4.700	2.470	2.270
6	3.070	1.390	3.250	5.690	2.000	3.460	10.800	.900	2.760	4.730	.920	2.560
7	1.220	4.200	3.170	4.500	2.130	3.900	10.600	.180	2.990	4.750	3.110	3.110
8	.020	2.280	3.440	3.820	2.560	3.650	9.910	2.600	3.080	2.020	3.370	3.120
9	.020	3.650	3.920	4.840	1.500	3.320	9.890	2.690	3.230	.020	3.090	2.760
10	2.910	5.170	3.870	4.830	.770	2.000	10.100	2.530	1.590	2.220	3.200	2.160
11	2.750	3.970	9.090	4.980	.690	.180	10.100	2.820	.520	4.540	3.120	4.600
12	3.810	3.210	8.090	5.390	.450	.030	10.100	3.370	4.260	4.080	1.680	3.720
13	3.760	3.010	4.920	4.570	2.680	1.530	10.200	.960	3.970	4.030	1.430	4.850
14	1.300	4.990	8.310	5.130	2.580	1.550	8.770	.490	2.120	3.720	1.870	8.710
15	.020	4.970	10.500	4.460	4.290	2.080	2.390	2.780	3.790	1.990	2.180	9.200
16	.020	5.700	10.100	5.590	2.000	3.080	1.980	3.130	1.550	.020	2.590	6.940
17	2.650	4.300	9.920	5.190	3.040	2.320	4.830	3.450	1.870	3.210	2.740	.360
18	6.150	4.360	9.140	5.070	.600	.040	2.640	3.510	.150	3.440	2.860	2.930
19	9.200	2.230	5.140	5.430	.670	.040	2.970	2.990	2.520	4.210	.520	2.260
20	21.100	.030	3.980	5.200	4.790	.970	3.900	2.270	3.280	3.260	.250	2.830
21	30.630	3.150	4.380	4.010	3.750	.870	4.180	1.090	3.430	3.940	2.940	3.380
22	30.330	4.150	2.750	3.830	3.510	1.400	1.950	3.430	4.700	1.300	2.490	3.780
23	30.200	2.940	4.210	4.690	3.660	2.160	.160	1.260	4.350	4.500	.370	1.370
24	30.350	.450	3.200	6.310	4.500	1.190	2.210	1.710	.020	5.230	1.710	.550
25	30.490	3.030	3.490	6.900	1.710	2.140	2.800	2.140	.020	3.940	2.200	3.410
26	30.570	.610	3.540	5.470	.260	4.250	1.170	1.030	3.440	3.690	1.590	3.880
27	27.510	.030	5.580	6.270	3.600	6.090	1.380	.300	3.790	3.550	.020	3.740
28	23.810	2.920	4.730	4.010	3.710	5.580	1.430	.320	3.800	3.600	3.020	3.000
29	19.910	1.560	4.350	4.020		6.700	.020	2.610	3.630	1.800	3.280	2.830
30	19.920	2.690	5.940	4.940		7.650	.020	.330	2.870	.020	2.950	.230
31	14.680		4.210	3.790		7.210		2.820		3.450	3.560	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE TEXAS

MAJOR BASIN WESTERN GULF

MINOR BASIN RIO GRANDE /LOWER/ BELOW PECOS RIVER

STATION LOCATION RIO GRANDE AT

BROWNSVILLE, TEXAS 71

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	2	60*	10	14	2	4	6	0	0	0									
10	14	60*	10	24	-	-	-	0	0	0									
10	28	60*	11	17	17	4	21	0	0	0									
11	11	60*	11	25	-	-	-	4	0	4									
12	15	60*	11	5	12	9	21	9	4	13									
12	30	60*	1	16	0	2	2	0	0	0									
1	13	61	2	3	-	-	-	0	0	0									
1	27	61*	3	1	0	4	4	0	0	0									
2	17	61*	3	2	-	-	-	0	0	0									
2	24	61	3	22	0	1	1	18	7	25									
3	17	61*	4	4	-	-	-	0	0	0									
3	24	61	5	5	0	2	2	1	0	1									
4	7	61	5	19	5	4	9	0	0	0									
5	24	61*	6	27	1	4	5	0	0	0									
6	13	61*	7	10	0	4	4	6	0	6									
6	28	61*	7	31	3	3	6	0	0	0									
7	12	61*	8	10	-	-	-	0	0	0									
8	2	61*	8	30	1	4	5	0	22	22									
8	16	61*	9	18	-	-	-	10	27	37									
8	30	61*	9	21	2	5	7	13	15	28									
9	13	61	10	23	-	-	-	16	30	46									
9	20	61	10	9	-	-	-	2	11	13									
9	28	61	10	12	0	5	5	0	11	11									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE TEXAS
MAJOR BASIN WESTERN GULF
MINOR BASIN RIO GRANDE /LOWER/ BELOW PECOS RIVER
STATION LOCATION RIO GRANDE AT
BROWNSVILLE, TEXAS 71

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	PROTOZOA (No. per ml.)	MICROINVERTEBRATES				DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE			ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	7	60	3000	1300	20	870		90		90	590		30	89	50	8	20	38	10	70	10	10			3				7--22
11	11	60	2700	160	50	130		290		620	1450	90	130	38	30	26	20	90	10	82	10	30	130		16				--773
12	9	60	4400	200		270		90		180	3710	90	270	4	10	38	10	70	10	26	10	60	180						78763
1	6	61	3000			200		160		50	2600	70	360	38	60	5	10	70	10	26	10	20	90			2			---63
2	3	61	900			90				20	800	20	130	92	30	91	10	38	10	71	10	40	40	30	999		4		7--6-
2	17	61	2400	20		360		200		70	1700	20	110	38	30	92	20	80	10	5	10	40		10	12	1			78-63
3	10	61	5100			200		130		220	4600	40	530	70	20	38	10	5	10	80	10	50			10	8			--763
3	17	61	6600			1200		330		870	4240	240	840	38	20	80	10	82	10	86	10	50							-8-63
4	7	61	2600			200		160		490	1780	90	530																--973
4	13	61	3600	190		1990				850	600	100	120	80	20	38	10	49	10	82	10	50	20						-8926
5	5	61	1600			270		40		230	1040	20	210	80	40	87	10	53	10	6	10	40			7	1			--963
5	12	61	10400	750	150	3230		350	40	440	5400	210	680	38	10	94	10	84	10	26	10	60			3				78863
6	7	61	10300	270	130	4040		290		680	4930	80	100	47	70	84	10	38	*	26	*	10			194	1	1		-8863
6	21	61	9400	750	20	3710		410		190	4330	60	520	47	90	56	*	21	*										-8366
7	5	61	2700	220	110	850				160	1390	70	560	47	50	71	10	26	10	8	10	30	20		53		3		-8363
7	19	61	6400	580	70	890		130		470	4300	310	220	47	20	8	10	9	10	27	10	50	310	20	53	1			74-63
8	9	61	10200	540	20	1370	90	120		210	7870	100	250	45	40	13	10	8	10	38	*	40				1			--763
8	23	61	4500		20	890	40	250		580	2730	20	170	47	10	92	10	75	10	68	10	70							78-63
9	6	61	4000	870	40	330	40	290		100	2300		170	89	30	8	20	70	20	38	10	20			146		1		7-362
9	20	61	500			100		290		80	20	20	40										40		148	2			-----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE TEXAS
MAJOR BASIN WESTERN GULF
MINOR BASIN RIO GRANDE /LOWER/ BELOW PECOS RIVER
STATION LOCATION RIO GRANDE AT BROWNSVILLE, TEXAS 71

DATE OF SAMPLE BEGINNING MONTH	DAY	YEAR	END MONTH	DAY	GALLONS FILTERED	EXTRACTABLES TOTAL	CHLORO-FORM	ALCOHOL	CHLOROFORM EXTRACTABLES ETHER INSOLUBLES	WATER SOLUBLES	NEUTRALS TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
1	25	61	2	7	4980	168	39	129	1	8	18	3	3	12	0	4	2	1	5
3	3	61	4	1	20880	*	–	–	–	–	–	–	–	–	–	–	–	–	–
5	10	61	5	27	4760	141	47	94	2	13	13	2	2	9	0	6	3	1	9
7	5	61	7	20	4914	152	29	123	1	6	15	3	2	9	1	3	1	1	2
8	9	61	8	26	4860	126	35	91	1	9	12	2	1	9	0	5	2	1	5

*SAMPLE NOT PROCESSED–EXCESSIVE FLOW

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE TEXAS
MAJOR BASIN WESTERN GULF
MINOR BASIN RIO GRANDE /LOWER/ BELOW PECOS RIVER
STATION LOCATION RIO GRANDE AT
BROWNSVILLE, TEXAS 71

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	3	60	28.1	-	8.3	-	-	-	-	-	160	120	180	-	120	-	-	-	-
10	7	60	29.9	-	8.3	-	-	-	-	-	360	180	480	-	80	-	-	-	-
10	14	60	29.9	-	8.3	-	-	-	-	-	240	140	380	-	50	-	-	-	-
10	21	60	24.0	-	8.3	-	-	-	-	-	200	170	340	-	90	-	-	-	-
10	28	60	20.7	-	8.3	-	-	-	-	-	180	600	460	-	2800	-	-	-	-
11	4	60	25.9	-	8.3	-	-	-	-	-	80	120	400	-	500	-	-	-	-
11	11	60	24.5	-	8.3	-	-	-	-	-	240	140	380	-	140	-	-	-	-
11	18	60	24.5	-	8.3	-	-	-	-	-	280	160	500	-	35	-	-	-	-
11	25	60	25.0	-	8.3	-	-	-	-	-	380	190	580	-	40	-	-	-	-
12	3	60	20.5	-	8.3	-	-	-	-	-	240	170	400	-	35	-	-	-	-
12	9	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
12	15	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
12	16	60	18.0	-	8.3	-	-	-	-	-	340	170	560	-	90	-	-	-	-
12	23	60	-	-	8.3	-	-	-	-	-	360	200	520	-	30	-	-	-	200
12	30	60	24.0	9.0	8.3	1.3	-	-	-	-	300	200	480	-	100	-	-	-	170
1	6	61	25.5	8.9	8.3	.9	-	-	-	-	480	180	560	-	100	-	-	-	550
1	13	61	24.5	-	8.3	-	-	-	-	-	220	150	420	-	30	-	-	-	91
1	20	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
1	27	61	21.5	-	8.3	-	-	-	-	-	220	180	500	-	55	-	-	-	-
2	24	61	24.5	8.5	8.3	1.5	-	-	-	-	240	168	180	-	110	-	-	-	-
3	3	61	26.5	8.6	8.3	1.2	-	-	-	-	200	118	190	-	90	-	-	-	-
3	10	61	23.5	8.5	8.3	1.1	-	-	-	-	180	126	150	-	95	-	-	-	260
3	17	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280
3	24	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
3	25	61	25.0	8.3	8.3	1.3	-	-	-	-	110	154	288	-	150	-	-	-	-
4	1	61	23.0	-	7.9	-	-	-	-	-	180	150	284	-	170	-	-	-	-
4	14	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64
4	21	61	27.0	8.3	7.9	1.0	-	-	-	-	210	144	300	-	65	-	-	-	-
4	28	61	28.5	8.4	7.9	.9	-	-	-	-	290	130	340	-	40	-	-	-	200
5	5	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	450
5	10	61	25.5	9.0	7.8	1.8	-	-	-	-	255	100	304	-	60	-	-	-	250
5	17	61	31.5	7.6	7.9	1.4	-	-	-	-	265	120	304	-	65	-	-	-	1000
5	24	61	31.0	7.2	7.8	.9	-	-	-	-	150	150	248	-	140	-	-	-	690
5	31	61	29.4	7.8	7.9	1.1	-	-	-	-	155	140	268	-	185	145	1.0	-	2000
6	7	61	30.5	8.7	7.9	.8	-	-	-	-	190	120	280	-	30	140	.8	-	40
6	13	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600
6	14	61	30.0	8.0	7.9	.8	-	-	-	-	180	130	276	-	160	90	1.0	-	-
6	21	61	30.0	8.0	7.9	2.0	-	-	-	-	140	130	260	-	60	90	-	-	400
6	28	61	30.5	7.6	6.7	1.8	-	-	-	-	250	90	300	-	20	180	-	-	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE TEXAS

MAJOR BASIN WESTERN GULF

MINOR BASIN RIO GRANDE /LOWER/ BELOW PECOS RIVER

STATION LOCATION RIO GRANDE AT

BROWNSVILLE, TEXAS 71

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	5	61	30.5	8.2	7.9	1.4	-	-	-	-	295	100	328	-	20	200	-	-	*100
7	12	61	31.5	7.8	7.9	1.1	-	-	-	-	230	110	272	-	12	120	-	-	80
7	19	61	31.0	7.2	7.8	.9	-	-	-	-	225	130	296	-	10	-	-	-	10
7	26	61	32.5	7.4	7.8	1.3	-	-	-	-	250	110	312	-	15	-	.5	-	700
8	2	61	29.5	7.6	7.3	1.1	-	-	-	-	260	100	308	-	30	180	.4	-	430
8	9	61	26.5	8.0	7.8	1.6	-	-	-	-	255	120	300	-	35	180	.4	-	170
8	16	61	30.0	7.7	7.9	1.2	-	-	-	-	195	120	280	-	40	150	.3	-	270
8	23	61	26.5	7.1	7.6	1.7	-	-	-	-	190	130	272	-	140	130	.5	-	1700
8	30	61	29.0	7.6	7.6	1.3	-	-	-	-	150	130	244	-	145	-	-	-	380
9	6	61	30.0	7.9	7.8	1.8	-	-	-	-	195	140	300	-	16	-	-	-	850
9	13	61	29.0	8.2	7.9	1.1	-	-	-	-	170	120	248	-	-	-	-	-	1800
9	20	61	27.0	7.1	-	1.1	-	-	-	-	145	100	224	-	-	-	-	-	100
9	28	61	29.0	7.0	7.7	.7	-	-	-	-	170	100	248	-	40	-	-	-	200

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Computed Data for Brownsville, Texas
Supplied by International Boundary and Water Commission

STATE	Texas
MAJOR BASIN	Western Gulf
MINOR BASIN	Rio Grande/Lower/below Pecos River
STATION LOCATION	Rio Grande at Brownsville, Texas

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	.556	.380	.264	1.105	.247	.161	.173	1.344	.397	.134	.351	1.276
2	.372	.358	.219	1.075	.208	.110	.476	1.967	.184	.130	.360	.673
3	.253	.975	.335	1.135	.158	.144	.815	2.410	.344	.344	.212	.411
4	.175	.803	.439	1.115	.149	.396	.641	2.198	.575	.443	.159	.296
5	.173	.439	.533	.894	.228	.377	.532	1.059	.776	.239	.201	.333
6	.180	.291	.531	.462	.308	.342	.490	.644	.713	.148	.188	.336
7	.167	.340	.380	.195	.377	.225	1.167	.993	.234	.146	.236	.234
8	.172	.380	.335	.236	.233	.153	1.576	.755	.164	.180	.217	.166
9	.149	.346	.353	.359	.223	.198	1.697	.505	.114	.199	.370	.180
10	.231	.529	.200	.280	.254	.473	1.441	.487	.092	.350	.399	.320
11	.339	.587	.227	.173	.268	.217	1.174	.330	.805	.462	.470	.801
12	.354	.624	.233	.174	.287	.114	.928	.207	1.614	.399	.455	.962
13	.192	.639	.308	.183	.346	.284	.609	.141	2.015	.281	.336	1.118
14	.125	.750	.488	.203	.201	.441	.440	.169	1.249	.444	.519	1.396
15	.084	.606	.471	.215	.141	.327	.489	.206	.321	.492	.459	1.136
16	.150	.381	.494	.214	.131	.220	.568	.281	.286	.466	.317	1.846
17	.439	.240	.348	.283	.224	.228	.615	.358	.726	.434	.242	3.206
18	.559	.194	.302	.294	.368	.210	.494	.325	.856	.413	.254	5.197
19	.444	.172	.216	.256	.283	.203	.299	.154	1.224	.379	.391	6.517
20	.466	.218	.251	.219	.530	.240	.183	.094	1.538	.211	.502	6.707
21	.433	.484	.248	.195	.554	.404	.147	.123	1.315	.146	.812	6.157
22	.386	.517	.245	.204	.510	.400	.180	.208	1.336	.221	1.553	5.568
23	.494	.460	.211	.252	.342	.224	.251	.248	1.177	.347	1.340	5.234
24	.389	.473	.178	.260	.205	.148	.817	.426	.585	.420	.761	4.487
25	.345	.488	.199	.210	.182	.161	.615	.343	.306	.380	1.234	3.447
26	.352	.457	.260	.213	.402	.506	.388	.169	.798	.220	2.040	2.847
27	1.978	.324	.289	.233	.388	.779	.278	.101	.661	.179	2.820	2.107
28	2.599	.284	.218	.202	.310	.834	.159	.175	.287	.335	3.271	1.557
29	2.147	.329	.159	.152		.648	.163	.319	.150	.669	3.370	1.648
30	.984	.320	.130	.243		.261	.338	1.014	.178	.665	3.191	2.088
31	.496		.517	.338		.131		.909		.494	2.471	

Computed as being sum of (1) Flow at Lower Brownsville Station, (2) City of Matamoros Diversion and (3) average daily Diversion at El Jardin Pump.

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE TEXAS

MAJOR BASIN WESTERN GULF

MINOR BASIN RIO GRANDE /LOWER/ BELOW PECOS RIVER

STATION LOCATION RIO GRANDE AT

LAREDO, TEXAS 45

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	25	60*	11	15	39	5	44	41	0	41								
11	29	60*	12	9	7	3	10	23	10	33								
12	6	60	1	19	9	5	14	0	5	5								
1	31	61*	2	10	0	2	2	0	0	0								
2	28	61*	3	13	1	1	2	0	0	0								
3	28	61*	4	11	0	2	2	0	0	0								
4	25	61*	5	8	1	6	7	0	0	0								
5	30	61*	6	13	1	3	4	0	0	0								
6	27	61*	7	13	23	3	26	14	0	14								
8	1	61*	8	29	42	4	46	124	14	138								
8	29	61*	9	14	27	3	30	20	0	20								
9	5	61	10	3	-	-	-	2	4	6								
9	12	61	10	2	-	-	-	14	0	14								
9	19	61	10	2	4	2	6	6	11	17								
9	26	61	10	10	6	3	9	22	5	27								

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE TEXAS

MAJOR BASIN WESTERN GULF

MINOR BASIN RIO GRANDE /LOWER/ BELOW PECOS RIVER

STATION LOCATION RIO GRANDE AT

LAREDO, TEXAS 45

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
			TOTAL	BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR		COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	5	60	1000			160		180		500	160		20	82	60	68	10	69	10	55	10	20						1	--9--
10	20	60	200					20		90	50	40	70	55	10	92	10	71	10	65	10	60	20						-----
11	8	60	400					20		200	180	90	20																--9--
11	22	60	1000			90		90	20	750	90	70	70	26	20	55	10	82	10	80	10	50							4-9--
12	1	60	4600			650		600		1970	1340	850	130	26	70	82	10	71	10	70	*	10		10					71963
12	20	60	6500			40		150		6180	130	200	400	80	60	82	30	26	10			10	70						--9--
12	29	60	3500			50		20		3240	200	760	270	80	90	71	*	26	*			10			2				--9--
1	12	61	4600			90		20		580	3950	290	340	47	70	80	10	26	10	71	*	10	50						---66
2	7	61	7200			130				940	6090	270	540	47	90	80	*	26	*			10	20						4-966
3	3	61	22600			70		20	50	490	21960		580	47	90								20						----6
3	30	61	43300	110		2180		220	330	760	39740	270	910	47	90	26	*	80	*			10		60	1				78726
4	12	61	28800			4040		160	20	530	24910	160	1110	47	90	26	*												4--16
4	27	61	4100			1840		80		290	1900	100	520	47	30	75	20	26	10	80	10	40							-8865
5	11	61	7500	20		3170		290	20	520	3480	100	750	47	70	26	10	80	*	75	*	20	40						48863
6	1	61	100							20	70		200																-----
6	14	61	700			40				60	580	20	60	69	30	47	20	92	10	71	10	30							---6-
6	30	61	100							60	80		150	69	60	55	10	92	*	13	*	20							-----
7	12	61	1300			490		290		180	340	50	200																---6-
8	7	61								20	20	20	80																-----
8	21	61	100					20		50			20	55	40	69	10	54	*	71	*	40							-----
9	5	61						20			20		40																-----
9	19	61	300			60		60		60	150		100																-----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(*Parts per billion*)

STATE TEXAS

MAJOR BASIN WESTERN GULF

MINOR BASIN RIO GRANDE /LOWER/ BELOW PECOS RIVER

STATION LOCATION RIO GRANDE AT LAREDO, TEXAS

45

			EXTRACTABLES			CHLOROFORM EXTRACTABLES										
								NEUTRALS								
		GALLONS FILTERED	TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
		3311	134	21	113	0	3	13	5	1	7	0	2	1	1	1
	4	1661	174	17*	157	–	–	–	–	–	–	–	–	–	–	–
	9	6557	62	12	50	0	1	9	4	1	4	0	1	0	0	1
	0	3922	168	14	154	0	1	11	5	2	4	0	1	0	0	1
	0	1470	250	34	216	1	6	16	5	2	9	0	4	1	1	5
	6	3067	108	15	93	0	3	8	2	1	5	0	2	1	0	1
	8	1752	122	14*	108	–	–	–	–	–	–	–	–	–	–	–
	4	4591	105	16	89	1	3	6	1	1	4	0	2	1	0	3
	26	3585	102	14	88	0	2	9	3	1	5	0	1	0	0	2
	1	4857	106	33	73	1	8	13	3	1	8	1	3	2	1	5
	6	1966	200	41	159	3	10	16	6	3	7	0	3	2	1	6
7 21 61	7 28	3775	106	25	81	1	7	10	4	1	5	0	2	1	0	4
8 16 61	8 23	4613	94	25	69	0	6	12	5	1	5	1	3	2	0	2
9 15 61	9 22	4698	70	21	49	1	3	14	8	2	4	0	1	1	0	1

*TOO LITTLE SAMPLE FOR SEPARATION

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE TEXAS
MAJOR BASIN WESTERN GULF
MINOR BASIN RIO GRANDE /LOWER/ BELOW PECOS RIVER
STATION LOCATION RIO GRANDE AT
LAREDO, TEXAS 45

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	4	60	26.0	-	8.3	-	-	-	-	-	78	129	240	-	308	160	-	-	230
10	11	60	26.2	-	8.2	-	-	-	-	-	78	120	226	-	110	164	-	-	150
10	18	60	24.0	-	8.0	-	-	-	-	-	15	66	100	-	4100	61	-	-	3000
10	25	60	23.0	-	8.2	-	-	-	-	-	44	115	175	-	2500	90	-	-	7800
11	1	60	21.0	-	8.2	-	-	-	-	-	36	102	157	-	5200	85	-	-	-
11	8	60	20.0	-	8.3	-	-	-	-	-	62	142	234	-	2760	150	-	-	6000
11	15	60	21.0	-	8.3	-	-	-	-	-	76	159	270	-	950	156	-	-	1300
11	22	60	18.5	-	8.2	-	-	-	-	-	102	133	266	-	525	176	-	-	2300
11	29	60	19.0	-	8.3	-	-	-	-	-	110	141	280	-	31	161	-	-	120
12	6	60	18.0	-	8.3	-	-	-	-	-	110	157	304	-	1390	219	-	-	4300
12	13	60	12.0	-	8.1	-	-	-	-	-	95	162	290	-	690	196	-	-	1800
12	20	60	14.0	-	8.2	-	-	-	-	-	95	140	268	-	244	171	-	-	790
12	27	60	13.0	-	8.2	-	-	-	-	-	100	148	280	-	420	173	-	-	7300
1	3	61	12.0	-	8.1	-	-	-	-	-	105	142	272	-	258	171	-	-	2900
1	10	61	12.0	-	8.2	-	-	-	-	-	105	144	274	-	143	165	-	-	770
1	17	61	13.0	-	8.2	-	-	-	-	-	105	150	280	-	69	168	-	-	20
1	24	61	14.0	-	8.2	-	-	-	-	-	110	148	284	-	116	179	-	-	700
1	31	61	11.0	-	8.2	-	-	-	-	-	110	150	280	-	120	165	-	-	-
2	7	61	10.0	-	8.2	-	-	-	-	-	110	140	280	-	200	140	-	-	400
2	14	61	16.0	-	8.3	-	-	-	-	-	110	140	270	-	170	135	-	-	110
2	21	61	16.2	-	8.3	-	-	-	-	-	120	118	256	-	172	148	-	-	550
2	28	61	15.0	-	8.3	-	-	-	-	-	120	131	270	-	232	148	-	-	630
3	7	61	23.0	-	8.3	-	-	-	-	-	120	117	254	-	141	148	-	-	330
3	14	61	22.2	-	8.3	-	-	-	-	-	125	114	254	-	158	169	-	-	100
3	21	61	19.0	-	8.3	-	-	-	-	-	120	107	248	-	210	168	-	-	66
3	28	61	24.0	-	8.3	-	-	-	-	-	125	100	242	-	186	171	-	-	400
4	4	61	21.0	-	8.3	-	-	-	-	-	125	121	264	-	110	148	-	-	66
4	10	61	21.5	-	8.3	-	-	-	-	-	135	121	276	-	268	158	-	-	-
4	11	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*100
4	18	61	21.0	-	8.3	-	-	-	-	-	175	121	298	-	90	160	-	-	90
4	25	61	26.0	-	8.3	-	-	-	-	-	190	120	306	-	71	171	-	-	-
4	26	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	480
5	2	61	25.5	-	8.0	-	-	-	-	-	105	96	210	-	1900	122	-	-	72000
5	9	61	26.0	-	8.3	-	-	-	-	-	145	130	280	-	190	132	-	-	110
5	16	61	28.0	-	8.3	-	-	-	-	-	150	112	280	-	76	173	-	-	300
5	23	61	28.1	-	8.3	-	-	-	-	-	130	123	258	-	63	135	-	-	400
5	30	61	27.0	-	8.3	-	-	-	-	-	100	137	266	-	760	187	-	-	-
6	2	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2300
6	6	61	27.5	-	8.3	-	-	-	-	-	62	128	240	-	1300	135	-	-	1800
6	13	61	28.5	-	8.3	-	-	-	-	-	86	140	260	-	1360	164	-	-	*300

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE TEXAS
MAJOR BASIN WESTERN GULF
MINOR BASIN RIO GRANDE /LOWER/ BELOW PECOS RIVER
STATION LOCATION RIO GRANDE AT
LAREDO, TEXAS 45

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
6	20	61	26.0	-	8.1	-	-	-	-	-	18	91	117	-	3200	55	-	-	11000
6	27	61	28.5	-	8.3	-	-	-	-	-	60	149	236	-	2860	105	-	-	1800
7	5	61	29.0	-	8.3	-	-	-	-	-	85	154	266	-	970	127	-	-	-
7	11	61	29.0	-	8.3	-	-	-	-	-	90	143	258	-	535	135	-	-	650
7	18	61	29.0	-	8.2	-	-	-	-	-	85	135	250	-	460	123	-	-	350
7	25	61	27.5	-	8.2	-	-	-	-	-	62	121	212	-	5500	94	-	-	16000
8	1	61	27.1	-	8.1	-	-	-	-	-	48	110	280	-	1560	183	-	-	*1000
8	8	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	900
8	15	61	29.0	-	8.3	-	-	-	-	-	74	141	250	-	1340	135	-	-	670
8	22	61	29.0	-	8.3	-	-	-	-	-	66	140	234	-	1760	136	-	-	1300
8	29	61	28.5	-	8.3	-	-	-	-	-	50	134	218	-	4200	151	-	-	8700
9	5	61	28.0	-	8.3	-	-	-	-	-	72	133	260	-	1220	195	-	-	130
9	12	61	26.0	-	8.3	-	-	-	-	-	70	138	254	-	1560	226	-	-	260
9	19	61	25.0	-	8.3	-	-	-	-	-	76	143	254	-	820	199	-	-	50
9	26	61	28.2	-	8.4	-	-	-	-	-	78	136	240	-	1090	182	-	-	2000

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Laredo, Texas
Supplied by International Boundary and Water Commission

STATE Texas

MAJOR BASIN Western Gulf

MINOR BASIN Rio Grande/Lower/below Pecos River

STATION LOCATION Rio Grande at Laredo, Texas

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	1.960	6.640	3.390	2.750	2.960	1.960	1.480	5.300	2.260	4.240	4.240	2.820
2	1.910	4.870	3.110	2.810	2.750	1.960	1.450	2.510	1.880	4.380	3.920	2.620
3	1.820	4.030	2.730	2.880	2.800	1.840	1.410	2.600	1.570	4.380	3.640	2.370
4	1.820	4.030	2.730	2.810	2.750	1.900	1.370	1.880	1.880	4.060	3.600	2.370
5	1.790	3.880	3.020	2.590	2.800	1.900	1.330	1.460	2.080	4.240	3.740	2.460
6	1.760	3.640	3.280	2.530	3.160	1.960	1.480	1.690	1.750	3.880	4.910	2.370
7	1.730	3.240	4.170	2.590	3.250	2.030	1.630	1.460	1.460	3.780	4.170	2.550
8	1.730	3.080	3.440	2.810	3.410	1.960	1.410	1.230	1.360	3.410	3.880	3.810
9	1.700	3.140	3.230	3.140	2.910	1.840	1.330	1.190	2.080	3.100	3.500	3.070
10	1.700	3.240	3.280	3.200	2.850	1.730	1.260	1.140	2.320	3.140	3.400	3.110
11	1.670	3.180	3.180	3.070	2.800	1.680	1.180	1.100	2.380	3.370	3.310	3.110
12	1.670	2.810	3.230	2.690	2.750	1.680	1.180	.978	2.080	4.060	3.110	2.820
13	5.010	2.760	3.490	2.590	2.690	1.730	1.110	.939	1.690	3.500	2.980	2.680
14	2.340	2.710	3.490	2.750	2.800	1.730	1.030	.978	2.010	3.230	3.020	3.160
15	2.460	2.660	3.110	3.070	2.750	1.900	1.110	.904	1.690	3.100	2.930	2.980
16	2.840	2.660	2.940	2.940	2.580	1.840	1.030	.869	1.510	3.010	2.770	2.680
17	51.560	2.710	3.180	2.810	2.580	1.730	.961	.869	4.770	3.050	2.830	2.460
18	15.790	2.610	3.230	2.810	2.580	1.780	.961	.812	36.020	3.530	3.140	2.370
19	8.790	2.570	3.110	2.590	2.510	1.780	.961	.745	75.220	4.480	3.740	2.680
20	9.890	2.520	3.280	2.640	2.460	1.730	.918	.745	92.520	3.990	3.920	2.940
21	7.240	3.140	3.110	2.640	2.460	1.590	.961	.763	27.970	3.410	3.670	2.550
22	6.140	4.030	2.730	2.590	2.460	1.520	.961	.788	12.680	2.830	6.750	2.620
23	5.050	3.240	2.730	2.640	2.340	1.560	.883	.939	9.010	5.120	5.860	2.280
24	4.480	2.810	2.730	2.750	2.280	1.520	.918	1.320	7.420	14.830	4.380	2.200
25	4.030	2.710	2.790	4.410	2.230	1.520	.961	1.880	6.430	8.760	3.740	2.100
26	3.600	2.710	2.860	3.400	2.230	1.480	.961	2.480	5.930	13.880	3.780	2.450
27	3.440	2.810	2.940	2.880	2.170	1.520	.918	2.010	5.330	13.980	4.060	2.810
28	4.380	3.640	2.790	2.810	2.120	1.520	.883	1.940	4.940	8.830	3.810	2.010
29	4.660	3.640	2.600	2.810		1.480	.883	4.100	4.520	7.560	3.450	2.680
30	9.920	3.430	2.600	2.880		1.520	5.690	4.630	4.310	5.860	3.110	2.680
31	17.270		2.860	3.140		1.450		2.950		4.840	2.880	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE TEXAS

MAJOR BASIN WESTERN GULF

MINOR BASIN RIO GRANDE /UPPER/ ABOVE PECOS RIVER

STATION LOCATION RIO GRANDE AT

EL PASO, TEXAS 46

DATE SAMPLE TAKEN			DATE OF DETERMINATION		RADIOACTIVITY IN WATER						RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
					ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	24	60	11	10	0	15	15	0	0	0							
10	31	60	12	19	0	12	12	0	5	5							
12	27	60	1	25	-	-	-	0	0	0							
1	3	61	2	20	-	-	-	0	0	0							
1	16	61	3	2	1	0	1	0	0	0							
2	6	61	2	23	1	1	2	0	0	0							
2	20	61	3	23	0	0	0	0	0	0							
3	6	61	4	4	-	-	-	0	0	0							
3	27	61*	4	10	8	5	13	0	0	0							
4	3	61	5	11	-	-	-	0	18	18							
4	28	61*	5	15	0	4	4	0	0	0							
5	8	61*	5	24	0	2	2	0	0	0							
5	29	61*	6	9	0	4	4	0	1	1							
6	12	61*	6	28	-	-	-	0	0	0							
6	26	61*	7	25	1	12	13	0	1	1							
7	10	61*	8	3	-	-	-	0	0	0							
7	31	61*	8	31	2	2	4	13	28	41							
8	14	61*	9	12	6	5	11	4	10	14							
8	28	61*	9	21	11	5	16	20	7	27							
9	18	61	10	13	-	-	-	5	5	10							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE TEXAS

MAJOR BASIN WESTERN GULF

MINOR BASIN RIO GRANDE /UPPER/ ABOVE PECOS RIVER

STATION LOCATION RIO GRANDE AT

EL PASO, TEXAS 46

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)	
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE
1	3	61	1500					360		20	1070		1010
2	6	61	2200					1010		20	1140		960
3	6	61	3500			1610		360		360	1160	50	1560
4	3	61	8600			6730		70		380	1470	40	1510
5	1	61	2400	20		210				580	1570	120	970
6	2	61	4000			390		120		770	2690	120	1370
7	3	61	4200			280		1510		540	1880		930
8	7	61	3400		40	170		1040	500	1390	270	20	
8	21	61	100					70		20	50		
9	18	61	300			20		80		20	210	20	80

DATE OF SAMPLE			DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
MONTH	DAY	YEAR	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFIERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
1	3	61	26	10	4	10	5	10	11	*	60	20						---63
2	6	61	12	40	65	10	4	10	45	*	30			5		6		8-763
3	6	61	4	20	12	10	65	10	51	*	50	50				4		84723
4	3	61	12	10	65	10	70	10	66	10	70	40						4-763
5	1	61	12	20	51	10	92	*	36	*	70							34763
6	2	61	15	20	12	10	65	10	51	10	60							45763
7	3	61	15	50	12	10	41	*	10	*	40							-1963
8	7	61											10	16	4	1		4193-
8	21	61	26	30	70	20	67	10	65	10	40	20				1	1	-----
9	18	61	12	50	92	10	15	*	71	*	40							-----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE TEXAS

MAJOR BASIN WESTERN GULF

MINOR BASIN RIO GRANDE /UPPER/ ABOVE PECOS RIVER

STATION LOCATION RIO GRANDE AT
EL PASO, TEXAS

46

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
4	4	61	4	9	5190	168	48	120	-	-	-	-	-	-	-	-	-	-	-
5	3	61	5	8	5227	161	41	120	-	-	-	-	-	-	-	-	-	-	-
6	5	61	6	10	4875	119	30	89	-	-	-	-	-	-	-	-	-	-	-
6	5	61		*	15292	150	40	110	4	10	14	2	1	11	0	4	3	1	4
7	3	61	7	8	5010	119	40	79	-	-	-	-	-	-	-	-	-	-	-
8	7	61	8	14	5865	113	32	81	-	-	-	-	-	-	-	-	-	-	-
9	5	61	9	14	4867	109	21	88	-	-	-	-	-	-	-	-	-	-	-
9	5	61		*	15742	114	31	83	1	8	9	1	1	6	1	3	2	0	8

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE TEXAS
MAJOR BASIN WESTERN GULF
MINOR BASIN RIO GRANDE /UPPER/ ABOVE PECOS RIVER
STATION LOCATION RIO GRANDE AT
EL PASO, TEXAS 46

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
3	20	61	20.0	9.0	8.1	1.3	-	1.2	1.6	-	125	154	268	-	220	217	-	751	-
3	27	61	15.0	8.4	8.2	1.7	-	1.4	1.6	-	105	169	270	-	195	226	-	720	250
4	17	61	20.5	8.7	8.2	2.1	-	1.5	1.6	-	135	186	300	-	90	268	-	936	-
4	24	61	27.0	8.6	8.2	1.8	-	1.2	1.8	-	135	192	332	-	105	290	-	820	-
5	5	61	22.5	8.3	8.3	2.9	-	1.4	1.6	-	155	196	332	-	110	310	-	900	-
5	8	61	23.0	8.5	8.2	3.2	-	1.4	1.7	-	210	202	318	-	110	338	-	1000	-
5	15	61	31.5	8.9	8.2	3.5	-	1.4	1.8	-	200	185	308	-	120	321	-	992	-
5	22	61	23.0	8.6	8.2	3.5	-	1.6	1.9	-	212	194	300	-	100	274	-	881	-
5	29	61	26.0	8.4	8.2	3.2	-	2.1	2.3	-	211	186	296	-	110	281	-	832	-
6	5	61	26.5	8.8	8.2	3.9	-	1.9	2.0	-	145	174	292	-	160	268	-	619	-
6	19	61	26.5	8.7	8.2	4.2	-	1.2	1.6	-	215	174	282	-	180	288	-	826	-
6	26	61	27.0	9.2	8.4	3.9	-	1.4	1.6	-	155	187	315	-	180	318	-	962	-
7	5	61	-	-	8.3	-	-	1.2	1.4	-	140	172	284	-	210	269	.0	962	-
7	11	61	28.0	11.4	8.3	5.7	-	1.6	2.0	-	110	156	254	-	3000	251	-	731	-
7	17	61	28.0	8.8	8.3	4.5	-	1.1	1.4	-	190	195	324	-	450	308	-	924	-
7	25	61	27.0	10.1	8.4	5.0	-	1.4	1.7	-	140	185	290	-	-	266	-	792	-
8	1	61	30.5	9.8	8.2	5.9	-	1.8	1.9	-	125	170	272	-	180	125	-	756	-
8	8	61	31.0	9.4	8.3	5.8	-	1.8	2.4	-	150	189	288	-	180	261	-	748	-
8	15	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	670
8	16	61	30.0	9.2	8.2	5.5	-	1.4	1.6	-	105	176	258	-	2500	230	.0	725	-
8	23	61	31.0	9.8	8.2	6.0	-	1.5	1.7	-	165	202	344	-	800	300	-	996	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station below Caballo Dam, New Mexico
Operated by U.S. Bureau of Reclamation

STATE Texas

MAJOR BASIN Western Gulf

MINOR BASIN Rio Grande/Upper/above Pecos River

STATION LOCATION Rio Grande at El Paso, Texas

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	.0020	.0015	.0016	.0011	.0012	.0014	1.680	.740	1.130	1.980	1.900	1.620
2	.0020	.0015	.0016	.0011	.0012	.0014	1.600	.748	1.260	1.940	1.850	1.510
3	.0019	.0015	.0016	.0010	.0012	.0014	1.580	.745	1.390	1.750	1.850	1.520
4	.0018	.0015	.0016	.0009	.0012	.0014	1.480	.759	1.380	1.700	1.880	1.500
5	.0018	.0015	.0015	.0008	.0012	.0014	1.300	.866	1.370	1.720	1.910	1.430
6	.0018	.0015	.0015	.0013	.0012	.0014	1.220	.957	1.450	1.750	1.780	.703
7	.0018	.0015	.0015	.0013	.0012	.0014	1.200	.982	1.550	1.800	1.680	.385
8	.0018	.0015	.0015	.0013	.0012	.0014	1.180	.968	1.550	1.800	1.740	.864
9	.0018	.0015	.0015	.0013	.0011	.0014	1.100	1.070	1.660	1.790	1.810	.424
10	.0018	.0015	.0015	.0013	.0011	.811	1.040	1.160	1.770	1.720	1.800	.211
11	.0018	.0015	.0015	.0012	.0011	1.490	.892	1.100	1.790	1.660	1.950	.0013
12	.0018	.0015	.0015	.0012	.0012	1.510	.807	1.120	1.710	1.630	1.950	.0013
13	.0017	.0015	.0015	.0012	.0012	1.740	.813	1.120	1.750	1.480	1.740	.0013
14	.0017	.0015	.0015	.0012	.0012	2.270	.796	1.110	1.840	1.540	1.320	.0013
15	.0018	.0015	.0015	.0012	.0012	2.680	.794	1.090	1.640	1.670	.453	.0013
16	.0018	.0015	.0014	.0012	.0012	2.660	.809	1.070	1.610	1.690	.286	.0013
17	.0019	.0015	.0014	.0012	.0012	2.750	.810	1.070	1.610	1.720	.508	.0013
18	.0019	.0015	.0014	.0012	.0012	2.790	.956	1.080	1.600	1.990	.516	.0013
19	.0018	.0016	.0014	.0012	.0012	2.800	.999	1.180	1.510	2.200	.638	.0013
20	.0017	.0016	.0014	.0012	.0013	2.800	1.120	1.250	1.500	2.250	.785	.0013
21	.0017	.0016	.0014	.0012	.0013	2.740	1.210	1.250	1.530	2.320	.798	.0013
22	.0017	.0016	.0014	.0013	.0013	2.720	1.190	1.240	1.470	2.330	1.300	.0013
23	.0017	.0016	.0013	.0013	.0013	2.740	1.180	1.250	1.460	2.350	1.550	.0013
24	.0017	.0016	.0013	.0013	.0013	2.770	1.130	1.280	1.470	2.340	1.610	.0013
25	.0017	.0016	.0013	.0012	.0013	2.820	1.070	1.270	1.480	2.220	1.870	.0013
26	.0017	.0016	.0012	.0012	.0014	2.720	1.010	1.230	1.580	2.070	2.060	.0013
27	.0016	.0016	.0012	.0012	.0014	2.600	.865	1.180	1.650	2.060	2.190	.0013
28	.0016	.0016	.0012	.0012	.0014	2.420	.783	1.160	1.670	2.140	2.190	.0013
29	.0016	.0016	.0012	.0013		2.310	.796	1.100	1.660	2.190	2.180	.0014
30	.0016	.0016	.0012	.0013		2.320	.763	1.100	1.840	2.130	2.004	.0014
31	.0016		.0012	.0013		1.990		1.140		2.030	1.850	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE COLORADO

MAJOR BASIN WESTERN GULF

MINOR BASIN RIO GRANDE /UPPER/ ABOVE PECOS RIVER

STATION LOCATION RIO GRANDE BELOW ALAMOSA, COLORADO 72

DATE SAMPLE TAKEN			DATE OF DETERMINATION		RADIOACTIVITY IN WATER						RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
					ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	MO.	DAY	$\mu\mu c/g$	$\mu\mu c/g$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$
11	3	60	11	18	0	2	2	4	0	4							
12	13	60	1	3	0	1	1	0	0	0							
12	19	60	1	16	1	1	2	0	0	0							
12	27	60	1	13	0	3	3	0	0	0							
1	3	61	1	24	0	1	1	0	2	2							
1	9	61	1	31	0	3	3	0	0	0							
1	16	61	2	2	0	2	2	0	7	7							
1	24	61	2	8	0	1	1	0	3	3							
1	30	61	2	13	0	1	1	18	35	53							
2	13	61	3	3	0	0	0	0	5	5							
2	20	61	3	6	0	0	0	0	0	0							
2	27	61	3	20	0	2	2	0	1	1							
3	13	61	4	3	0	1	1	0	0	0							
3	20	61	4	4	0	3	3	0	0	0							
3	27	61	4	14	0	1	1	0	0	0							
4	11	61	4	24	0	0	0	0	0	0							
5	9	61	5	25	0	2	2	0	0	0							
6	6	61	6	28	0	1	1	0	6	6							
7	5	61	8	28	0	2	2	3	23	26							
8	7	61	9	22	1	3	4	4	10	14							
9	12	61	10	24	0	3	3	2	12	14							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE COLORADO

MAJOR BASIN WESTERN GULF

MINOR BASIN RIO GRANDE /UPPER/ ABOVE PECOS RIVER

STATION LOCATION RIO GRANDE BELOW ALAMOSA, COLORADO

72

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
11	1	60	1100			230		50	200	200	380	70	1050	46	40	36	10	92	10	48	10	40	70		2				4-----
12	6	60	600			50		50		50	450		490	46	40	36	20	92	10	85	*	30		10					-----6
2	13	61	300					20		20	290		290	92	20	36	20	46	20	70	10	40							------
2	27	61	3100			20	40	220	50	20	2790	90	1880	36	20	42	20	92	20	85	10	40	70	10	5	1	5		71-46
3	27	61	3700			130	20	270		130	3130	110	2170	92	20	46	20	36	10	51	10	50	20		2			1	-1776
5	9	61	2500			130		340		890	1140	200	1900	46	40	92	20	36	10	48	10	30			90	2	8	4	41976
6	6	61	1700			60		310		290	1010	120	830	46	30	92	20	48	10	16	*	50			4	7			---76
7	5	61	1400			250		420		130	560	220	1160	46	30	48	20	15	10	92	10	30			5				-1--6
8	7	61	15000	60	460	2550		1570		4370	5960	1330	1530	46	70	41	10	92	*	48	*	10						1	48--6
9	12	61	11300	480	80	970		1610	20	4950	3230	1040	1950	46	20	26	10	70	10	82	10	50			10	1	1	1	41937

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE COLORADO

MAJOR BASIN WESTERN GULF

MINOR BASIN RIO GRANDE /UPPER/ ABOVE PECOS RIVER

STATION LOCATION RIO GRANDE BELOW ALAMOSA, COLORADO

72

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
11	7	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80
11	14	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240
11	21	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	110
11	28	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160
12	6	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	130
12	13	60	-	-	7.9	-	-	-	-	-	7	96	116	0	20	59	.0	220	130
12	19	60	-	-	7.8	-	-	-	-	-	7	108	120	0	20	59	.0	209	-
12	27	60	-	-	7.9	-	-	-	-	-	7	92	106	0	20	42	.0	195	-
1	3	61	-	-	8.1	-	-	-	-	-	7	92	110	0	20	40	.0	176	-
1	9	61	-	-	7.4	-	-	-	-	-	10	90	94	0	0	35	.0	152	-
1	16	61	-	-	7.5	-	-	-	-	-	6	82	84	0	0	32	.1	-	-
1	24	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8500
1	30	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6200
2	20	61	-	-	7.6	-	-	-	-	-	6	78	256	5	0	45	.1	162	20
2	27	61	-	-	7.2	-	-	-	-	-	7	-	224	5	0	60	.4	-	-
3	13	61	-	-	7.3	-	-	-	-	-	-	90	-	5	0	64	-	248	*100
3	20	61	-	-	7.6	-	-	-	-	-	10	106	128	5	0	83	-	-	-
3	27	61	-	-	8.1	-	-	-	-	-	16	106	136	0	0	70	-	-	*100
5	9	61	-	-	8.1	-	-	-	-	-	17	86	156	25	-	110	-	-	-
6	6	61	-	-	7.6	-	-	-	-	-	16	-	168	20	-	-	-	-	-
7	5	61	-	-	8.1	-	-	-	-	-	31	154	276	15	-	88	-	598	-
9	12	61	-	-	7.9	-	-	-	-	-	39	134	176	15	25	109	.3	336	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station near Lobatos, Colorado
Operated by U.S. Geological Survey

STATE Colorado

MAJOR BASIN Western Gulf

MINOR BASIN Rio Grande/Upper/above Pecos River

STATION LOCATION Rio Grande below Alamosa, Colorado

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	.030	.076	.144	.170	.180	.160	.160	.688	.854	.076	.033	.030
2	.030	.073	.145	.165	.175	.170	.177	1.090	.811	.069	.037	.034
3	.032	.078	.125	.155	.168	.185	.166	1.080	.753	.067	.053	.058
4	.030	.076	.140	.130	.165	.210	.160	1.160	.567	.069	.065	.090
5	.032	.073	.140	.140	.165	.230	.177	1.230	.418	.062	.051	.092
6	.029	.073	.085	.135	.160	.230	.280	.940	.358	.060	.054	.088
7	.032	.065	.100	.140	.160	.225	.276	.612	.313	.073	.054	.082
8	.029	.067	.117	.135	.165	.220	.276	.485	.251	.067	.049	.090
9	.036	.071	.116	.140	.175	.225	.272	.418	.211	.062	.049	.144
10	.037	.289	.116	.140	.185	.230	.247	.395	.243	.058	.044	.095
11	.036	.542	.134	.134	.200	.231	.219	.429	.239	.056	.040	.080
12	.034	.586	.156	.135	.210	.231	.211	.429	.211	.056	.039	.071
13	.033	.599	.173	.135	.230	.235	.203	.502	.177	.058	.044	.082
14	.036	.605	.177	.145	.240	.211	.192	.485	.163	.054	.067	.095
15	.036	.586	.170	.160	.245	.196	.192	.353	.140	.053	.069	.088
16	.037	.280	.181	.155	.248	.192	.192	.318	.114	.051	.067	.080
17	.060	.166	.177	.150	.240	.199	.173	.284	.105	.049	.067	.073
18	.065	.120	.160	.146	.235	.203	.156	.268	.111	.045	.069	.065
19	.111	.105	.160	.150	.230	.166	.284	.251	.134	.042	.065	.078
20	.150	.102	.160	.150	.220	.170	.513	.259	.134	.053	.056	.076
21	.160	.098	.163	.150	.215	.166	.854	.313	.144	.076	.045	.073
22	.134	.098	.163	.150	.210	.160	.710	.318	.160	.080	.045	.080
23	.122	.098	.166	.151	.200	.160	.667	.384	.153	.060	.073	.122
24	.108	.098	.166	.155	.170	.160	.731	.777	.156	.053	.051	.114
25	.098	.098	.166	.160	.175	.163	.717	.639	.134	.040	.047	.105
26	.088	.100	.170	.170	.175	.181	.525	.554	.122	.039	.045	.092
27	.085	.111	.170	.170	.165	.170	.446	.667	.114	.095	.039	.090
28	.085	.147	.170	.180	.150	.160	.379	.874	.105	.069	.033	.085
29	.082	.147	.173	.190		.153	.384	1.070	.095	.054	.037	.080
30	.080	.137	.173	.165		.160	.525	.864	.090	.042	.036	.073
31	.073		.173	.170		.153		.820		.040	.033	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE VIRGINIA
MAJOR BASIN SOUTHEAST
MINOR BASIN ROANOKE RIVER
STATION LOCATION ROANOKE RIVER AT
JOHN H KERR RESR & DAM, VIRGINIA 91

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
7	17	61	8	8	0	0	0	0	0	0							
7	31	61	9	7	0	0	0	3	1	4							
8	7	61	9	8	0	0	0	3	5	8							
8	14	61	9	13	0	0	0	3	5	8							
8	21	61	9	26	1	0	1	1	4	5							
8	28	61	9	26	0	0	0	0	2	2							
9	5	61	10	6	0	0	0	0	0	0							
9	11	61	10	6	1	0	1	0	0	0							
9	18	61	10	7	1	0	1	4	7	11							
9	25	61	10	3	0	0	0	0	2	2							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE VIRGINIA
MAJOR BASIN SOUTHEAST
MINOR BASIN ROANOKE RIVER
STATION LOCATION ROANOKE RIVER AT
JOHN H KERR RESR & DAM, VIRGINIA 91

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
6	19	61	1500	120	60	40			20	1160	40	170	20	58	90	56	*								7	6			----7
7	17	61	1200		960	70				70	110		70	58	70	47	20	2	*	56	*	10	70		110	9			2----
8	7	61	600		50	130		20	50	220	110	130		58	30	57	30	47	20	28	20	10			130	19			-----
8	21	61	100	70		20					20	80	20	57	30	58	30	28	10	2	10	20	20						-----
9	5	61	100			20		20		80				58	60	57	10	21	10	56	10	10			14				-----
9	18	61								20		70	50	58	30	82	20	57	20	56	10	30							-----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE VIRGINIA
MAJOR BASIN SOUTHEAST
MINOR BASIN ROANOKE RIVER
STATION LOCATION ROANOKE RIVER AT
JOHN H KERR RESR & DAM, VIRGINIA 91

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
8	7	61	8	28	4370	361	188	173	9	47	34	3	2	28	1	15	30	2	51
9	5	61	9	21	4550	301	155	146	11	40	37	3	3	30	1	12	23	2	30

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Buggs Island, Virginia
Operated by U.S. Geological Survey

STATE Virginia

MAJOR BASIN Southeast

MINOR BASIN Roanoke River

STATION LOCATION Roanoke River at John H. Kerr Reservoir & Dam, Va.

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	1.120	5.050	3.880	.310	4.040	17.700	8.910	8.120	10.500	4.410	5.300	18.400
2	.410	4.890	4.060	1.040	6.600	16.000	12.000	8.640	12.100	1.570	2.950	2.600
3	8.320	4.860	.425	6.380	4.220	14.900	18.300	6.360	3.580	8.140	4.160	.215
4	7.370	4.900	.262	4.420	.318	5.360	20.500	7.410	2.800	.256	2.970	.210
5	8.450	1.090	6.460	4.000	.310	1.780	17.600	9.610	7.440	7.760	.256	8.880
6	9.450	.575	5.710	3.720	3.550	16.400	17.400	3.130	7.610	10.300	.250	8.420
7	8.030	8.000	5.160	.920	2.380	18.100	14.200	3.080	8.680	10.400	4.250	7.930
8	4.320	5.730	6.180	.415	2.160	12.700	3.470	11.200	7.410	2.240	7.090	4.040
9	2.200	5.640	7.050	7.220	2.120	16.400	2.620	8.050	5.760	.268	5.780	1.820
10	8.780	5.650	1.060	5.200	2.210	16.800	18.400	6.730	3.620	6.760	4.580	.215
11	7.480	3.460	1.860	5.120	.405	9.530	20.500	9.380	2.580	7.110	5.360	10.300
12	7.520	.950	8.660	4.820	.298	2.220	14.700	13.700	10.500	6.800	.630	8.310
13	7.460	.515	7.420	4.160	4.120	19.000	15.600	2.920	8.800	7.120	.250	7.260
14	8.000	5.810	4.860	1.980	2.690	16.300	18.600	2.650	5.690	7.600	2.060	15.400
15	3.240	4.890	4.780	.560	2.120	15.300	18.100	15.100	3.460	2.380	2.890	2.460
16	1.310	5.180	5.280	7.440	2.220	16.300	14.700	18.000	3.600	.262	6.060	.220
17	9.140	4.760	2.200	5.950	2.470	12.500	20.500	17.300	.250	7.580	5.510	.220
18	7.930	5.000	1.020	5.780	.550	4.450	18.900	16.500	.250	5.780	4.780	4.060
19	8.000	.745	6.630	7.640	.256	.995	17.300	16.000	3.940	6.560	.445	6.480
20	6.840	.485	5.900	5.700	4.480	6.710	16.900	2.920	4.560	5.520	.240	6.580
21	6.930	5.450	4.960	3.960	4.540	5.200	17.200	2.960	5.820	7.200	5.350	7.360
22	1.180	4.780	5.080	1.230	3.080	6.440	17.700	8.070	17.800	1.660	6.940	5.810
23	.765	4.400	4.080	8.250	6.100	10.700	13.800	9.640	16.300	.256	5.600	.915
24	10.200	1.750	2.140	8.040	11.500	12.600	9.890	8.130	2.420	7.760	8.540	.210
25	7.050	2.080	.390	7.580	3.110	14.200	9.580	8.120	3.000	5.430	8.210	11.200
26	6.920	.515	.485	6.900	13.800	9.140	9.350	10.300	14.800	3.380	5.020	5.240
27	6.480	.205	3.550	5.290	19.400	17.600	10.100	3.340	17.000	3.580	.240	2.860
28	6.160	4.600	5.450	2.260	19.700	17.700	8.080	3.100	19.500	4.910	19.300	2.600
29	1.340	4.340	4.990	1.000		15.100	3.140	8.550	18.400	.905	18.100	2.960
30	.200	4.830	3.940	7.380		14.700	3.050	6.760	17.000	.250	14.500	.210
31	6.620		2.020	6.220		9.800		8.080		9.040	16.400	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE TEXAS

MAJOR BASIN WESTERN GULF

MINOR BASIN SABINE RIVER

STATION LOCATION SABINE RIVER NEAR RULIFF, TEXAS

73

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	3	60	10	20	1	2	3	0	1	1								
10	10	60	10	21	2	1	3	0	1	1								
10	17	60	11	1	0	0	0	9	8	17								
10	24	60	11	15	0	3	3	0	1	1								
10	31	60	11	21	2	1	3	1	0	1								
11	7	60	11	29	1	0	1	2	0	2								
11	14	60	11	30	0	0	0	0	0	0								
11	29	60	12	20	1	1	2	0	2	2								
12	5	60	1	3	0	0	0	0	3	3								
12	12	60	1	6	1	1	2	0	0	0								
12	19	60	1	13	1	0	1	0	9	9								
12	27	60	1	19	0	0	0	0	0	0								
1	2	61	1	31	0	0	0	0	0	0								
1	9	61	1	27	0	1	1	0	0	0								
1	16	61	2	6	0	1	1	0	3	3								
1	23	61	2	17	0	1	1	0	1	1								
1	29	61	2	13	3	0	3	24	5	29								
2	6	61	2	21	4	0	4	0	0	0								
2	13	61	3	3	0	0	0	11	0	11								
2	19	61	3	9	1	0	1	0	5	5								
2	27	61	3	21	1	0	1	0	0	0								
3	6	61	3	27	1	0	1	0	0	0								
3	13	61	3	31	1	0	1	2	0	2								
3	20	61	4	5	0	0	0	0	5	5								
3	27	61	4	17	0	0	0	0	4	4								
4	3	61	5	5	2	1	3	0	5	5								
4	10	61	5	2	1	0	1	0	1	1								
4	17	61	5	17	0	0	0	2	8	10								
4	24	61	5	23	0	0	0	0	0	0								
5	1	61	6	8	0	0	0	0	0	0								
5	8	61	6	8	2	0	2	6	1	7								
5	15	61	6	2	1	1	2	0	0	0								
5	22	61	6	14	2	1	3	0	7	7								
5	29	61	6	20	1	1	2	0	0	0								
6	5	61	6	28	1	0	1	0	0	0								
6	11	61	7	6	1	0	1	0	0	0								
6	19	61	7	28	5	0	5	5	0	5								
7	31	61*	8	30	1	1	2	3	7	10								

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE TEXAS
MAJOR BASIN WESTERN GULF
MINOR BASIN SABINE RIVER
STATION LOCATION SABINE RIVER NEAR
RULIFF, TEXAS 73

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
8	30	61*	9	18	0	0	0	1	5	6									
9	6	61	10	3	-	-	-	0	0	0									
9	11	61	10	23	-	-	-	1	3	4									
9	18	61	10	11	-	-	-	1	4	5									
9	25	61	10	9	0	0	0	2	10	12									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE	TEXAS
MAJOR BASIN	WESTERN GULF
MINOR BASIN	SABINE RIVER
STATION LOCATION	SABINE RIVER NEAR RULIFF, TEXAS

73

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFIERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	4	60	200			20			20	110	50	150	70	26	40	70	10	53	10	10	*	40	70	20	20			1	------
11	7	60	200							220		20		26	60	65	*	57	*	53	20	40	70		8				4-----
12	5	60	100					50		20			50										50		2		8	2	------
12	29	60								20			20										270	10					------
1	3	61										20											90						------
2	5	61								20	20												90		171	999			------
3	6	61	100								70	20														4			------
3	20	61	300	20				160	20		70		20										20		10	4			------
4	3	61	300				20	160		90	20	20	20	43	30	26	20	92	10	44	10	50	20		8	8	2	5	------
4	17	61	400			140		170		100				57	30	43	10	82	10	26	10	50	20		29	21			------
5	1	61	4200	290		480		1370	60	1660	390	250	60	57	50	26	20	82	10	84	10	10			12				41937
5	15	61	2400	50		90		690	50	1230	310	1230	180	57	70	26	10	82	10	23	*	10		10	2				41--7
6	5	61	300			110		60		40	60	150	40	57	30	26	10	43	10	68	10	50			6	2	1		------
6	19	61	100							20	50	50	250	43	40	92	10	10	10	88	10	40							------
7	3	61	100					20		50			90	26	30	57	10	82	10	56	10	50							------
7	19	61	100						120	20		20	20	92	20	26	10	70	10	71	*	60			11	2			------
8	7	61		50								20																	------
8	21	61	100			20				20	20	50	50	26	30	71	10	68	10	57	*	50	20						------
9	6	61	400			60		60		80	170	40	60																------
9	18	61	200			20		20		80	100		20										20		6	1			------

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE TEXAS
MAJOR BASIN WESTERN GULF
MINOR BASIN SABINE RIVER
STATION LOCATION SABINE RIVER NEAR
RULIFF, TEXAS

73

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	5	60	10	22	5000	369	121	248	1	27	34	2	1	29	2	17	18	2	22
11	8	60	11	24	5000	349	100	249	2	21	24	2	2	17	3	12	15	2	24
12	14	60	12	27	5000	378	142	236	9	38	21	1	2	18	0	13	18	3	40
1	17	61	1	29	5000	304	104	200	5	24	20	1	1	17	1	9	11	1	34
2	15	61	2	24	5050	330	165	165	6	36	45	10	6	29	0	20	18	2	38
3	14	61	3	27	5000	407	101	306	1	21	30	3	3	21	3	14	11	1	23
4	8	61	4	20	5070	341	142	199	6	34	27	2	2	22	1	14	20	1	40
5	12	61	5	30	5000	181	82	99	3	19	20	2	2	15	1	10	10	1	19
6	22	61	7	17	3200	372	206	166	6	47	54	15	8	30	1	21	33	2	43
9	1	61	9	23	5000	260	77	183	2	14	25	4	2	18	1	12	9	1	14

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE TEXAS

MAJOR BASIN WESTERN GULF

MINOR BASIN SABINE RIVER

STATION LOCATION SABINE RIVER NEAR RULIFF, TEXAS 73

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	3	60	-	-	7.2	-	-	-	-	-	38	42	72	15	5	12	.1	121	-
10	24	60	-	-	7.2	-	-	-	-	-	49	26	44	100	27	15	.2	157	-
10	31	60	-	-	7.3	-	-	-	-	-	37	32	72	100	5	12	.2	120	-
11	7	60	-	-	7.2	-	-	-	-	-	30	24	56	-	50	12	-	105	-
11	29	60	-	-	7.4	-	-	-	-	-	36	36	80	-	30	27	.0	169	-
12	5	60	-	-	7.9	-	-	-	-	-	32	20	50	160	110	15	.0	98	-
12	19	60	-	-	7.5	-	-	-	-	-	18	14	36	140	20	16	.0	-	-
12	27	60	-	-	7.7	-	-	-	-	-	23	16	38	50	20	19	.0	72	-
1	2	61	-	-	7.5	-	-	-	-	-	22	14	28	100	0	13	.0	55	-
1	16	61	-	-	7.4	-	-	-	-	-	10	16	24	50	0	11	.0	-	-
1	23	61	-	-	7.6	-	-	-	-	-	10	10	30	80	26	24	.0	77	-
1	29	61	-	-	7.3	-	-	-	-	-	19	14	44	50	110	40	.0	114	-
2	6	61	-	-	6.8	-	-	-	-	-	20	12	32	40	500	16	.0	48	-
2	13	61	-	-	7.3	-	-	-	-	-	14	32	52	40	75	30	.0	104	-
2	19	61	-	-	-	-	-	-	-	-	6	-	-	-	-	10	.0	90	-
2	27	61	-	-	7.6	-	-	-	-	-	-	-	-	80	-	8	.0	-	-
3	13	61	-	-	6.8	-	-	-	-	-	17	-	-	35	-	10	.0	89	-
3	27	61	-	-	7.0	-	-	-	-	-	6	18	44	50	-	16	-	-	-
4	10	61	-	-	-	-	-	-	-	-	-	-	48	-	-	-	-	-	-
4	24	61	-	-	6.8	-	-	-	-	-	27	26	68	65	-	20	-	-	-
5	1	61	-	-	7.7	-	-	-	-	-	33	32	76	40	-	22	-	-	-
5	11	61	-	-	7.7	-	-	-	-	-	-	-	-	25	-	21	.1	-	-
5	22	61	-	-	7.3	-	-	-	-	-	-	-	-	10	-	20	.1	-	-
5	29	61	-	-	7.4	-	-	-	-	-	-	-	56	20	-	16	.1	-	-
6	5	61	-	-	7.2	-	-	-	-	-	-	-	-	10	-	9	-	-	-
6	11	61	-	-	7.2	-	-	-	-	-	76	36	76	10	-	26	-	-	-
6	19	61	-	-	7.3	-	-	-	-	-	70	44	104	10	240	85	-	-	-
7	10	61	-	-	7.7	-	-	-	-	-	31	26	60	35	35	19	.0	102	-
7	24	61	-	-	7.5	-	-	-	-	-	32	22	60	35	0	16	.1	109	-
8	14	61	-	-	7.2	-	-	-	-	-	35	24	40	30	0	14	.0	112	-
8	21	61	-	-	7.8	-	-	-	-	-	38	26	48	35	0	28	.1	147	-
8	30	61	-	-	7.1	-	-	-	-	-	30	26	72	30	28	9	.0	112	-
9	6	61	-	-	-	-	-	-	-	-	40	32	48	25	0	18	-	-	-
9	18	61	-	-	6.8	-	-	-	-	-	13	10	24	50	0	8	-	-	-
9	25	61	-	-	7.2	-	-	-	-	-	17	20	28	100	0	17	-	86	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station near Ruliff, Texas
Operated by U.S. Geological Survey

STATE: Texas

MAJOR BASIN: Western Gulf

MINOR BASIN: Sabine River

STATION LOCATION: Sabine River near Ruliff, Texas

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	1.720	4.700	7.680	36.500	22.800	24.200	21.400	4.330	2.010	11.400	6.740	2.160
2	1.860	4.800	6.400	37.200	21.400	22.100	22.100	4.240	1.910	11.400	6.740	2.010
3	2.310	4.240	5.300	35.800	20.100	21.400	22.800	4.420	1.860	11.400	6.400	1.910
4	3.030	3.520	4.600	33.500	19.500	20.700	23.500	5.000	1.810	11.000	5.540	1.860
5	3.450	2.960	4.150	31.200	19.000	20.100	24.200	5.200	1.810	10.300	4.700	1.810
6	3.450	2.600	3.910	29.100	19.000	19.500	24.900	5.000	1.860	9.600	4.070	1.760
7	3.100	2.360	3.990	31.200	19.500	19.000	24.200	4.700	1.910	8.780	3.830	1.720
8	2.720	2.160	4.700	34.200	19.500	18.500	23.500	4.420	1.960	8.080	3.750	1.600
9	2.420	2.010	5.940	39.600	18.500	18.000	24.200	4.240	1.910	8.300	3.910	1.520
10	2.260	1.910	7.680	49.200	18.000	17.600	24.200	4.070	1.860	8.780	3.990	1.480
11	2.110	2.010	9.950	52.400	17.200	17.200	23.500	3.910	1.810	9.300	3.750	1.560
12	2.010	3.170	12.300	49.200	16.300	16.700	23.500	3.670	1.860	11.400	3.310	2.060
13	1.910	4.240	14.800	46.000	15.200	15.900	23.500	3.520	1.910	12.300	2.840	4.440
14	1.860	4.150	17.600	44.400	14.800	15.200	22.800	3.380	1.960	12.300	2.480	7.880
15	1.720	3.670	20.700	44.400	14.200	13.900	22.100	3.240	2.060	12.300	2.480	11.000
16	1.640	3.380	22.100	42.800	13.600	12.300	20.700	3.170	2.260	11.800	2.540	15.900
17	1.560	3.170	22.100	41.200	15.900	11.800	20.700	3.100	2.420	10.600	2.420	32.000
18	1.480	3.380	22.800	39.600	19.500	12.300	18.500	3.170	2.480	9.040	2.310	36.500
19	1.560	4.510	22.800	37.200	21.400	14.200	17.200	3.240	2.900	8.080	2.480	35.000
20	1.760	5.420	23.500	35.800	24.200	17.600	15.500	3.100	5.160	7.480	2.960	32.000
21	1.910	6.080	23.500	33.500	28.400	24.900	14.200	2.840	6.080	6.920	2.840	27.700
22	1.960	6.400	23.500	32.800	32.000	29.100	12.800	2.600	6.560	6.240	2.480	22.100
23	1.810	6.560	23.500	31.200	32.800	31.200	11.000	2.480	7.100	6.080	2.310	18.000
24	1.600	7.100	23.500	29.100	33.500	30.500	9.300	2.310	7.480	6.400	2.160	13.600
25	1.440	7.680	23.500	27.700	32.800	28.400	7.880	2.260	8.080	6.400	2.160	9.600
26	1.400	8.300	23.500	26.300	30.500	27.000	6.740	2.210	8.780	6.080	2.260	6.740
27	1.400	9.040	24.200	25.600	29.100	24.900	5.940	2.260	9.300	5.660	2.160	5.000
28	1.480	9.040	25.600	27.000	27.000	24.200	5.300	2.360	9.600	5.300	2.260	4.070
29	1.760	9.040	26.300	27.700		22.800	4.900	2.260	10.300	5.540	2.310	3.520
30	2.600	8.520	28.400	26.300		22.800	4.510	2.160	10.600	6.560	2.480	3.170
31	3.750		32.800	24.900		22.100		2.060		7.100	2.360	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE NEW YORK

MAJOR BASIN NORTHEAST

MINOR BASIN ST. LAWRENCE RIVER

STATION LOCATION ST. LAWRENCE RIVER AT

MASSENA, NEW YORK 63

DATE SAMPLE TAKEN			DATE OF DETERMI-NATION		RADIOACTIVITY IN WATER							RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
					ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	10	60	10	24	0	1	1	0	2	2									
10	18	60	11	14	-	-	-	0	4	4									
10	25	60	11	9	0	3	3	0	0	0									
11	1	60	11	18	0	1	1	0	0	0									
12	5	60	12	22	0	0	0	1	9	10									
12	12	60	1	10	0	0	0	0	0	0									
12	19	60	1	18	0	0	0	0	1	1									
12	29	60	1	20	0	2	2	0	3	3									
1	3	61	1	23	0	1	1	0	0	0									
1	10	61	2	3	0	2	2	0	2	2									
1	16	61	2	1	0	1	1	0	0	0									
1	23	61	2	7	0	1	1	0	0	0									
1	30	61	2	15	0	0	0	0	0	0									
2	7	61	2	24	0	0	0	10	9	19									
2	14	61	3	2	0	1	1	0	0	0									
2	20	61	3	13	0	0	0	1	4	5									
2	28	61	3	22	0	1	1	0	0	0									
3	6	61	3	27	0	0	0	0	0	0									
3	13	61	3	30	0	0	0	1	1	2									
3	20	61	4	5	0	0	0	0	0	0									
3	27	61	4	19	0	0	0	0	0	0									
4	3	61	4	19	0	0	0	0	0	0									
4	10	61	4	27	0	0	0	0	0	0									
4	17	61	5	16	0	0	0	0	0	0									
5	1	61	6	6	0	1	1	0	0	0									
5	8	61	6	1	0	1	1	0	0	0									
5	15	61	6	2	0	1	1	0	0	0									
5	22	61	6	14	0	0	0	0	0	0									
6	1	61	6	20	0	0	0	0	0	0									
6	5	61	7	7	1	2	3	0	0	0									
6	12	61	7	6	0	0	0	0	0	0									
6	19	61	7	17	0	0	0	0	0	0									
6	26	61	7	27	0	0	0	0	0	0									
7	31	61*	8	25	0	2	2	0	0	0									
8	28	61*	9	15	1	0	1	0	0	0									
9	5	61	9	29	-	-	-	4	0	4									
9	11	61	10	6	-	-	-	0	7	7									
9	18	61	10	19	0	0	0	0	2	2									
9	25	61	10	9	-	-	-	1	2	3									

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE NEW YORK
MAJOR BASIN NORTHEAST
MINOR BASIN ST. LAWRENCE RIVER
STATION LOCATION ST. LAWRENCE RIVER AT MASSENA, NEW YORK

63

DATE OF SAMPLE MONTH	DAY	YEAR	ALGAE (Number per ml.) TOTAL	BLUE-GREEN COCCOID	BLUE-GREEN FILAMENTOUS	GREEN COCCOID	GREEN FILAMENTOUS	FLAGELLATES (Pigmented) GREEN	FLAGELLATES (Pigmented) OTHER	DIATOMS CENTRIC	DIATOMS PENNATE	INERT DIATOM SHELLS (No. per ml.) CENTRIC	INERT DIATOM SHELLS (No. per ml.) PENNATE	DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*) FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE	OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	DOMINANT GENERA (See Introduction for Identification)
11	14	60	100		20				20				20	95	20	97	20	9	10	82	10	40	20		2				------
12	5	60	100			20			50	20	50		20	47	40	9	30	82	10	95	10	20			1				------
1	10	61	200			40			20	70	160	20	130	95	20	9	20	97	10	47	10	30			3	1			------
2	9	61	300							50	220	70	50	95	30	97	30	47	20	82	10	10		10	12	2			------
3	1	61	300							70	250	50	400	92	10	36	10	62	10	58	10	60					8		------
3	6	61	600			40			40	250	270	50	50	95	30	97	20	47	10	82	10	30			8				--9--
3	22	61	1700			90		130	20	890	560	270	160	97	40	95	20	60	10	80	10	20	40	10	24	2			3-9-7
4	25	61	1300			210			20	620	460	210	150	97	30	47	30	95	30	82	*	20	20		14	1			3-9-7
5	1	61	700			220		20	20	90	310	160	160	95	40	47	20	82	10	97	10	30	20		10	5	1		------
5	15	61	1900		40	250		60	20	660	910	310	750	95	30	47	20	82	10	60	10	30		10	39	5		4	--986
6	5	61	500			60				100	290	80	190	95	40	47	20	35	10	97	10	30			6				------
6	19	61	400	20						70	290	130	450	95	30	97	10	16	10	45	10	50			19				------
7	5	61	700		20			40		270	390	60	190	95	40	47	10	80	10	82	10	40			43	2			------
7	17	61	1400			190			20	540	700	170	770	95	40	82	10	80	10	16	10	30			10				--987
8	7	61	200			20		20	20	90	70	20	220	82	20	95	20	16	10	47	10	50			50				------
8	21	61	900			100		290		210	270	100	210	16	20	80	10	15	10	95	10	60			46				---4-
9	5	61	100			70					70														24				------
9	27	61											20										170		24	4			------

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE NEW YORK
MAJOR BASIN NORTHEAST
MINOR BASIN ST. LAWRENCE RIVER
STATION LOCATION ST. LAWRENCE RIVER AT MASSENA, NEW YORK

63

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
1	5	61	3	31	5250	302	141	161	4	17	86	9	9	67	1	13	9	1	11
4	19	61	5	15	5490	171	71	100	1	16	33	2	4	26	1	9	6	1	5
6	1	61	6	20	5851	155	76	79	2	20	27	2	3	20	2	9	7	2	9
7	10	61	7	25	4880	156	51	105	1	14	18	2	2	14	0	7	4	1	6
8	16	61	8	30	5176	148	47	101	1	12	19	2	2	14	1	6	2	1	6
9	26	61	10	10	5226	135	26	109	0	7	12	1	2	9	0	3	1	1	2

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NEW YORK

MAJOR BASIN NORTHEAST

MINOR BASIN ST. LAWRENCE RIVER

STATION LOCATION ST. LAWRENCE RIVER AT MASSENA, NEW YORK 63

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	6	60	-	-	7.8	-	-	-	-	-	29	126	140	5	5	31	.0	173	-
10	10	60	-	-	7.8	-	-	-	-	-	29	-	144	5	-	30	.0	-	-
10	18	60	-	-	7.7	-	-	-	-	-	-	84	120	5	5	28	.1	-	-
11	1	60	-	-	7.9	-	-	-	-	-	29	-	152	5	5	45	.0	-	-
2	14	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*4
2	20	61	.0	-	8.0	-	-	.8	2.2	.0	35	100	139	-	-	27	-	200	40
2	27	61	2.2	-	8.0	-	-	1.6	3.6	.0	30	95	136	-	-	26	-	165	15
3	6	61	5.6	-	8.0	-	-	1.1	3.1	.1	31	83	125	-	-	20	-	179	30
3	13	61	8.3	-	8.1	-	-	1.3	3.5	.2	33	88	130	-	-	21	-	187	26
3	20	61	10.3	-	8.0	-	-	.4	1.9	.2	31	91	125	-	-	26	-	201	23
3	27	61	1.1	13.7	8.1	2.7	12	1.5	4.0	.6	23	86	121	10	-	23	.3	170	45
4	3	61	2.0	13.9	8.2	2.5	19	1.6	4.2	.0	21	88	117	10	-	25	.0	175	10
4	10	61	2.8	13.3	8.1	2.7	80	1.7	4.1	.0	26	88	119	10	-	30	.1	167	60
4	17	61	4.7	12.7	7.9	2.2	90	2.2	5.3	.4	23	84	114	10	-	23	.0	164	40
4	24	61	5.6	12.1	8.1	2.4	11	2.1	4.5	.0	23	88	115	15	-	18	.0	168	55
5	1	61	8.9	-	8.0	-	-	2.7	5.1	-	30	88	119	7	-	-	-	177	110
5	8	61	9.2	11.8	8.1	2.2	128	2.0	4.3	.0	17	88	122	5	-	24	.0	175	75
5	15	61	13.9	-	8.2	-	-	-	-	-	26	90	122	5	15	-	-	190	100
5	22	61	10.0	10.9	8.3	1.6	7	2.0	-	.0	26	90	125	5	5	23	.0	184	-
5	31	61	13.9	-	8.2	-	-	-	-	-	30	86	121	7	10	-	-	192	-
6	5	61	12.2	10.7	8.3	1.2	9	1.8	3.7	.0	21	90	125	7	5	27	.1	192	-
6	12	61	16.1	-	8.2	-	-	-	-	-	26	90	122	5	15	-	-	189	-
6	13	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
6	19	61	14.5	10.1	8.3	1.4	8	2.3	4.5	.0	28	92	125	5	37	27	.0	198	15
6	26	61	16.1	-	8.2	-	-	-	-	-	26	92	125	5	15	-	-	200	60
7	5	61	21.4	-	8.1	-	-	-	-	-	17	88	120	5	15	-	-	191	130
7	10	61	20.6	-	8.0	-	-	-	-	-	-	-	-	7	20	-	-	204	25
7	17	61	18.3	-	8.1	-	-	-	-	-	26	90	131	5	25	-	-	214	55
7	24	61	22.2	-	8.2	-	-	-	-	-	26	88	129	5	27	-	-	196	30
7	31	61	23.3	-	7.7	-	-	-	-	-	21	90	132	5	25	-	-	193	5
8	7	61	23.3	-	8.0	-	-	-	-	-	-	86	123	5	20	-	-	197	60
8	14	61	21.7	8.3	8.1	.6	8	1.2	3.5	.0	30	87	121	0	25	32	.1	199	200
8	21	61	21.1	-	8.2	-	-	-	-	-	26	90	124	5	62	-	-	213	5
8	30	61	21.1	-	8.1	-	-	-	-	-	24	86	124	5	30	-	-	217	10
9	5	61	22.2	-	8.0	-	-	-	-	-	26	86	122	5	10	-	-	200	*5
9	11	61	22.2	-	8.2	-	-	.9	3.8	-	30	86	121	5	10	-	-	191	-
9	13	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
9	18	61	17.8	-	8.1	-	-	-	-	-	26	83	120	1	20	-	-	199	100
9	25	61	21.1	8.4	8.2	.6	10	.3	.8	.5	25	85	129	0	20	26	.0	186	-
9	26	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at St. Lawrence River - International Rapids Section
(St. Lawrence Power Pool)
Supplied by U.S. Army Corps of Engineers

STATE New York

MAJOR BASIN Northeast

MINOR BASIN St. Lawrence River

STATION LOCATION St. Lawrence River at Massena, New York

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	225.000	194.000	210.000	210.000	214.000	216.000	201.000	249.000	278.000	271.000	258.000	250.000
2	224.000	195.000	210.000	209.000	216.000	211.000	201.000	249.000	278.000	271.000	258.000	250.000
3	226.000	206.000	210.000	210.000	216.000	211.000	215.000	249.000	279.000	271.000	258.000	250.000
4	226.000	205.000	210.000	209.000	203.000	197.000	215.000	249.000	280.000	271.000	258.000	250.000
5	225.000	205.000	210.000	210.000	202.000	197.000	216.000	249.000	280.000	271.000	254.000	250.000
6	215.000	205.000	210.000	210.000	215.000	211.000	214.000	230.000	280.000	271.000	254.000	250.000
7	216.000	206.000	210.000	210.000	215.000	211.000	214.000	230.000	280.000	271.000	254.000	250.000
8	214.000	205.000	210.000	210.000	216.000	212.000	200.000	230.000	280.000	271.000	254.000	250.000
9	204.000	206.000	210.000	210.000	216.000	211.000	200.000	230.000	279.000	270.000	254.000	249.000
10	206.000	205.000	210.000	210.000	216.000	211.000	214.000	230.000	282.000	271.000	254.000	249.000
11	205.000	205.000	210.000	210.000	202.000	197.000	214.000	230.000	281.000	271.000	254.000	249.000
12	206.000	205.000	210.000	210.000	202.000	197.000	214.000	230.000	282.000	271.000	252.000	249.000
13	195.000	205.000	210.000	210.000	216.000	211.000	213.000	238.000	282.000	271.000	252.000	249.000
14	195.000	205.000	210.000	210.000	216.000	211.000	213.000	238.000	282.000	271.000	251.000	249.000
15	195.000	205.000	210.000	210.000	216.000	211.000	213.000	238.000	282.000	263.000	252.000	249.000
16	194.000	205.000	210.000	210.000	216.000	211.000	213.000	238.000	282.000	263.000	252.000	246.000
17	195.000	210.000	210.000	210.000	216.000	211.000	213.000	239.000	279.000	263.000	252.000	246.000
18	195.000	211.000	210.000	210.000	202.000	197.000	213.000	238.000	279.000	263.000	252.000	246.000
19	195.000	210.000	210.000	210.000	202.000	197.000	213.000	238.000	279.000	263.000	249.000	246.000
20	195.000	210.000	210.000	210.000	216.000	211.000	213.000	258.000	279.000	263.000	249.000	246.000
21	195.000	210.000	210.000	203.000	216.000	211.000	213.000	258.000	279.000	263.000	249.000	246.000
22	195.000	210.000	210.000	204.000	216.000	211.000	230.000	258.000	279.000	263.000	249.000	246.000
23	194.000	210.000	210.000	214.000	216.000	211.000	230.000	258.000	279.000	262.000	248.000	239.000
24	196.000	207.000	210.000	214.000	216.000	211.000	230.000	258.000	272.000	263.000	249.000	239.000
25	195.000	207.000	210.000	214.000	202.000	197.000	230.000	258.000	272.000	263.000	245.000	239.000
26	195.000	206.000	210.000	214.000	202.000	197.000	230.000	258.000	272.000	263.000	250.000	239.000
27	195.000	210.000	210.000	214.000	216.000	211.000	230.000	278.000	272.000	263.000	250.000	239.000
28	195.000	211.000	210.000	201.000	216.000	211.000	230.000	278.000	272.000	262.000	250.000	239.000
29	195.000	209.000	209.000	200.000		211.000	249.000	277.000	272.000	259.000	250.000	240.000
30	194.000	211.000	210.000	214.000		217.000	249.000	278.000	272.000	259.000	250.000	236.000
31	195.000		210.000	214.000		214.000		278.000		258.000	250.000	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE NEW MEXICO
MAJOR BASIN COLORADO RIVER
MINOR BASIN SAN JUAN RIVER
STATION LOCATION SAN JUAN RIVER AT SHIPROCK, NEW MEXICO 93

DATE SAMPLE TAKEN MO.	DAY	YEAR	RADIOACTIVITY IN WATER: DATE OF DETERMINATION MONTH	DAY	ALPHA SUSPENDED µµc/l	ALPHA DISSOLVED µµc/l	ALPHA TOTAL µµc/l	BETA SUSPENDED µµc/l	BETA DISSOLVED µµc/l	BETA TOTAL µµc/l	RADIOACTIVITY IN PLANKTON (dry): DATE OF DETERMINATION MO.	DAY	GROSS ACTIVITY ALPHA µµc/g	GROSS ACTIVITY BETA µµc/g	RADIOACTIVITY IN WATER GROSS ACTIVITY: SUSPENDED µµc/l	DISSOLVED µµc/l	TOTAL µµc/l
8	7	61	9	12	56	3	59	181	23	204							
8	14	61	9	22	35	25	60	111	53	164							
8	21	61	9	22	132	4	136	519	51	570							
8	28	61	9	27	66	7	73	74	0	74							
9	6	61	10	3	-	-	-	27	17	44							
9	18	61	10	4	94	6	100	185	17	202							
9	25	61	10	9	18	2	20	94	18	112							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE: NEW MEXICO
MAJOR BASIN: COLORADO RIVER
MINOR BASIN: SAN JUAN RIVER
STATION LOCATION: SAN JUAN RIVER AT SHIPROCK, NEW MEXICO

93

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFIERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
8	14	61	300								270		20																-----
8	21	61																											-----
9	6	61	1400							40	1350	20	640	92	10	64	10	70	10	65	10	60						1	7-76-
9	18	61																											-----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE NEW MEXICO
MAJOR BASIN COLORADO RIVER
MINOR BASIN SAN JUAN RIVER
STATION LOCATION SAN JUAN RIVER AT SHIPROCK, NEW MEXICO

93

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
9	13	61	9	18	3177	167	56	111	3	10	24	4	2	18	0	7	5	1	6

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE NEW MEXICO
MAJOR BASIN COLORADO RIVER
MINOR BASIN SAN JUAN RIVER
STATION LOCATION SAN JUAN RIVER AT
SHIPROCK, NEW MEXICO 93

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
8	8	61	-	5.6	8.0	1.4	-	-	-	.1	19	120	210	14	508	125	.3	330	8000
8	14	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2100
8	15	61	25.0	4.7	8.1	5.1	-	-	-	.1	40	138	298	19	32	200	.3	750	-
8	22	61	27.0	5.9	8.0	2.1	-	-	-	.1	30	112	180	22	4800	140	.3	-	22000
8	28	61	21.0	7.7	8.2	2.1	-	-	-	.1	28	124	234	4	4875	180	-	360	25000
9	5	61	18.0	7.2	8.0	2.2	-	-	-	.0	32	128	272	12	750	190	-	600	11000
9	12	61	21.0	3.7	7.8	2.4	-	-	-	.1	36	116	196	20	8000	190	-	510	30000
9	20	61	20.0	7.2	7.9	2.4	-	-	-	.1	25	116	206	3	7000	165	-	-	2700
9	25	61	13.0	8.1	7.7	.7	-	-	-	.1	23	116	170	7	2375	110	-	380	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Shiprock, New Mexico
Operated by U.S. Geological Survey

STATE: New Mexico
MAJOR BASIN: Colorado River
MINOR BASIN: San Juan River
STATION LOCATION: San Juan River at Shiprock, New Mexico

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	.270	.645	.560	.475	.582	.525	2.120	4.620	7.490	1.120	.559	.546
2	.260	.613	.540	.378	.599	.500	1.720	4.920	7.610	1.120	.621	.540
3	.245	.629	.588	.342	.550	.495	1.610	5.770	6.810	1.170	1.500	.534
4	.225	.589	.691	.370	.510	.510	1.740	6.250	5.770	1.320	2.050	.570
5	.209	.573	.733	.400	.495	.610	2.460	5.800	4.820	1.420	1.870	.712
6	.217	.581	.677	.450	.490	.610	2.870	4.520	4.590	1.270	1.860	.892
7	.205	.597	.588	.500	.460	.588	2.780	3.630	4.520	1.220	1.420	.780
8	.221	.663	.540	.520	.446	.550	3.030	3.250	4.460	1.040	.964	.828
9	.250	.735	.658	.520	.490	.540	3.280	2.720	4.490	1.080	.719	.788
10	.307	.857	.719	.520	.566	.515	3.000	2.230	4.620	1.210	.570	1.160
11	.361	.745	.712	.530	.566	.545	2.620	2.400	4.690	1.160	.470	2.260
12	.525	.690	.684	.510	.628	.691	2.270	3.580	4.820	.972	.409	2.840
13	.565	.654	.664	.480	.646	.946	2.000	4.420	4.520	.733	.510	1.720
14	.549	.645	.726	.500	.658	1.080	2.300	4.660	4.420	.621	.663	1.390
15	1.150	.637	.719	.510	.705	1.240	2.440	3.990	4.110	.564	.804	1.170
16	1.650	.621	.684	.490	.733	1.500	1.930	3.550	3.990	.475	1.010	1.350
17	1.880	.645	.622	.495	.804	1.600	1.740	3.230	3.990	.398	2.200	1.220
18	2.140	.637	.582	.495	.800	1.360	2.180	3.580	3.680	.290	2.600	1.440
19	2.120	.604	.555	.495	.700	1.360	3.320	4.170	3.500	.204	4.620	5.950
20	1.660	.604	.505	.500	.652	1.280	3.990	4.890	3.050	.172	2.840	4.800
21	1.180	.599	.515	.485	.572	1.160	3.960	6.030	3.050	.223	1.710	2.920
22	1.020	.622	.520	.520	.572	1.300	3.790	5.690	2.800	.223	1.250	2.680
23	.904	.604	.490	.520	.577	1.250	3.930	6.510	2.450	.294	.980	2.300
24	.820	.616	.465	.588	.588	1.440	3.700	6.690	2.240	.342	.916	2.180
25	.778	.604	.540	.652	.588	1.700	3.740	6.690	2.120	.204	1.280	2.030
26	.735	.594	.560	.640	.530	1.840	3.140	6.940	1.960	.137	1.260	1.830
27	.717	.588	.560	.652	.515	1.590	2.560	7.280	1.730	.112	1.160	1.720
28	.699	.582	.588	.764	.515	1.290	2.120	7.470	1.560	.092	1.030	1.600
29	.690	.604	.604	.670		1.290	2.340	7.710	1.320	.077	.748	1.470
30	.672	.582	.599	.577		1.840	3.550	7.530	1.180	.338	.600	1.410
31	.663		.540	.545		2.440		7.320		.478	.558	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE GEORGIA

MAJOR BASIN SOUTHEAST

MINOR BASIN SAVANNAH RIVER

STATION LOCATION SAVANNAH RIVER AT PORT WENTWORTH, GEORGIA 47

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$		MO.	DAY	$\mu\mu c/g$	$\mu\mu c/g$		$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$
10	3	60	10	20	0	0	0	0	28	28									
10	10	60	10	20	-	-	-	0	80	80									
10	17	60	11	1	-	-	-	0	24	24									
10	24	60	11	15	-	-	-	0	8	8									
10	31	60	11	21	-	-	-	0	1	1									
11	7	60	11	21	-	-	-	0	0	0									
11	14	60	11	28	-	-	-	0	33	33									
11	21	60	12	1	-	-	-	0	144	144									
11	28	60	12	19	-	-	-	0	28	28									
12	5	60	12	22	0	0	0	0	52	52									
12	19	60	1	6	-	-	-	0	158	158									
12	27	60	1	17	-	-	-	0	16	16									
1	3	61	1	25	0	0	0	0	57	57									
1	9	61	1	25	-	-	-	0	26	26									
1	16	61	2	1	-	-	-	0	14	14									
1	23	61	2	15	-	-	-	0	10	10									
1	29	61	2	15	-	-	-	0	12	12									
2	6	61	2	21	1	0	1	8	36	44									
2	13	61	2	24	-	-	-	0	5	5									
2	20	61	3	6	-	-	-	0	0	0									
2	27	61	3	14	-	-	-	0	2	2									
3	6	61	3	21	1	0	1	0	49	49									
3	13	61	3	31	-	-	-	1	20	21									
3	20	61	4	4	-	-	-	0	36	36									
3	27	61	4	12	-	-	-	0	0	0									
4	3	61	4	19	1	0	1	0	5	5									
4	10	61	4	28	-	-	-	0	0	0									
4	17	61	5	2	-	-	-	2	3	5									
4	24	61	5	17	-	-	-	0	3	3									
5	1	61	5	15	0	0	0	0	2	2									
5	8	61	5	26	-	-	-	0	0	0									
5	15	61	6	1	-	-	-	0	1	1									
5	22	61	6	20	-	-	-	0	50	50									
5	29	61	7	10	-	-	-	1	9	10									
6	5	61	6	28	0	0	0	0	4	4									
6	12	61	7	6	-	-	-	0	41	41									
6	19	61	7	7	-	-	-	5	107	112									
6	26	61	9	5	-	-	-	2	174	176									
7	3	61	8	2	1	0	1	1	9	10									
7	10	61	9	6	-	-	-	0	11	11									
7	17	61	8	10	-	-	-	0	4	4									

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE GEORGIA

MAJOR BASIN SOUTHEAST

MINOR BASIN SAVANNAH RIVER

STATION LOCATION SAVANNAH RIVER AT PORT WENTWORTH, GEORGIA 47

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
7	24	61	8	24	-	-	-	4	6	10							
7	31	61	10	4	-	-	-	6	7	13							
8	7	61	10	4	0	0	0	12	15	27							
8	14	61	9	12	-	-	-	9	16	25							
8	21	61	9	13	-	-	-	4	7	11							
8	28	61	9	26	0	0	0	0	21	21							
9	5	61	9	29	-	-	-	7	9	16							
9	11	61	10	6	-	-	-	0	6	6							
9	18	61	10	20	-	-	-	34	7	41							
9	26	61	10	3	-	-	-	0	12	12							

WATER QUALITY BASIC DATA

STATE GEORGIA

MAJOR BASIN SOUTHEAST

MINOR BASIN SAVANNAH RIVER

STATION LOCATION SAVANNAH RIVER AT PORT WENTWORTH, GEORGIA 47

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	4	60	200							50	110		20	65	10	22	10	19	10	57	10	70	20			1			-----
10	17	60	500	20		50		50	50	180	130	20	70	57	20	56	10	22	10	65	*	70	40	10	1		1		-----
11	7	60	100							50	90	70	160	57	10	65	10	20	10	22	10	60	110						-----
11	21	60	300					20		90	140	160	90	22	20	29	10	20	10	97	10	60				2			-----
12	5	60	500			130		20	20	220	110	90	110	22	10	19	10	57	10	29	*	60	70						-----
12	19	60	100			20					20	70		22	10	20	20	57	10	65	10	60	20		2		1		-----
1	3	61	100		20	20				20			20	22	20	65	10	19	10	82	10	60	20		4		2		-----
1	16	61	300				20			130	130	20	130	22	10	57	10	43	10	19	10	70			1				-----
2	6	61	200							50	160	70	70	43	10	57	10	22	*	71	*	70		10			2		-----
2	20	61	200	20						50	110	70	270	71	20	22	10	19	10	20	*	60						1	-----
3	6	61	200			40		90	20	20		90	70	92	10	57	10	19	10	71	*	80		30					-----
3	20	61	200				20	110		20	20	20	70	71	10	65	10	72	10	57	10	60		10	2				-----
4	3	61	200		20	20	20	20		90	70	110	270	57	20	82	10	71	10	54	10	60	20				2		-----
4	17	61	200					20	20	20	170	40	100	43	10	19	10	22	10	20	10	70							-----
5	1	61	100				20				110		20	71	30	57	10	72	10	97	10	50	20		2				-----
5	27	61	2100			210		230		810	810	120	390	56	10	71	10	57	10	70	10	50					2		--767
6	5	61	1200		80	80		440	40	290	230	390	120	56	40	58	10	57	10	22	*	40			2	2			-1---
6	19	61	900			60		120		480	230	100	80	19	10	57	10	43	10	92	*	60			2		3		----7
7	3	61	700			60		230		310	120	60	120	57	30	56	20	58	10	29	*	30		10	3				----7
7	17	61	800			60		100		440	190		120	57	40	58	20	56	10	19	*	30				1			----7
8	7	61	200			90		40	20	90			70	58	30	56	10	57	10	19	10	40	20		3		2		-----
8	21	61	500			120		210		100	80	60	20	57	20	56	20	58	10	26	*	40			3	3			-----
9	5	61	200		20			80		60	40	20		65	20	84	10	22	10	97	*	70				1			-----
9	18	61	200			60		40		20	40		20	57	30	56	30	58	20	65	*	30	60						-----

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE GEORGIA
MAJOR BASIN SOUTHEAST
MINOR BASIN SAVANNAH RIVER
STATION LOCATION SAVANNAH RIVER AT PORT WENTWORTH, GEORGIA 58

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
5	22	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2100
5	25	61	22.5	6.4	7.0	1.0	-	-	-	-	4	20	25	40	99	3	-	40	-
5	29	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2000
6	5	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2400
6	8	61	27.2	6.6	6.8	1.0	-	-	-	-	6	18	23	30	106	3	-	52	-
6	12	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33000
6	19	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	630
6	26	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3500
7	3	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3000
7	10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3000
7	17	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1400
7	20	61	26.4	6.4	6.5	1.5	-	-	-	-	2	15	15	50	45	3	-	51	-
7	24	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18000
7	31	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1900
8	7	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2100
8	14	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1500
8	21	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2400
8	24	61	23.9	6.6	6.5	1.0	-	-	-	-	4	15	19	35	48	3	-	49	-
8	28	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3200
9	5	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3000
9	11	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2000
9	18	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4000
9	21	61	22.5	6.6	6.8	1.2	-	-	-	-	5	19	20	20	36	1	-	51	-
9	25	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4000

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station near Clyo, Georgia
Operated by U.S. Geological Survey

STATE Georgia

MAJOR BASIN Southeast

MINOR BASIN Savannah River

STATION LOCATION Savannah River at Port Wentworth, Georgia

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	7.650	7.110	7.110	7.890	8.010	18.100	9.870	29.200	8.370	10.900	14.900	13.100
2	8.490	7.010	7.010	8.010	7.770	19.200	11.100	27.200	8.250	12.000	12.900	13.700
3	8.610	7.010	7.110	7.890	7.770	20.800	12.800	25.700	7.890	12.900	10.000	14.500
4	8.010	7.010	7.310	7.890	8.010	22.400	14.000	24.200	7.890	13.300	9.100	14.900
5	7.530	7.010	7.410	7.890	8.490	25.200	15.000	23.700	8.250	12.900	8.980	15.300
6	7.410	7.110	7.410	8.010	8.610	28.700	16.300	22.800	8.010	10.900	9.100	16.100
7	7.110	7.010	7.310	8.370	8.250	29.700	17.800	22.000	7.650	9.480	9.480	15.900
8	7.110	6.810	7.210	8.890	8.010	29.700	20.400	20.800	7.410	9.100	9.100	15.300
9	7.110	6.610	7.210	8.610	8.130	29.200	24.700	18.400	7.310	8.860	8.500	14.900
10	7.110	6.610	7.310	8.130	8.750	27.200	29.700	16.600	7.530	8.500	8.260	14.900
11	7.110	6.710	7.650	7.770	9.870	25.200	32.500	14.800	8.130	8.040	8.860	14.900
12	7.110	6.810	7.650	7.530	10.800	23.200	32.500	13.600	8.130	7.820	8.980	15.100
13	7.010	7.210	7.410	7.650	10.000	22.400	34.900	13.200	7.410	7.930	8.500	14.500
14	7.010	7.210	7.410	8.250	8.890	22.000	31.900	13.400	7.310	8.260	8.620	12.200
15	7.110	7.010	7.530	8.750	8.250	22.000	29.200	13.400	7.310	8.620	8.620	10.500
16	7.310	6.810	7.770	9.030	8.010	23.200	27.200	13.400	7.410	8.620	8.500	9.900
17	7.310	6.710	8.130	8.890	8.010	25.700	25.200	12.600	7.650	8.380	8.380	9.220
18	6.910	6.910	8.610	8.750	8.750	28.200	24.700	11.700	8.130	8.040	8.980	8.500
19	6.810	7.010	8.610	8.610	9.170	28.700	26.200	11.200	8.010	7.930	9.620	7.820
20	7.650	7.210	8.130	9.170	8.890	27.200	28.200	10.800	7.530	8.860	10.200	7.490
21	9.030	7.310	7.650	9.730	8.890	25.200	30.700	10.200	7.210	10.900	9.900	7.380
22	9.870	7.010	7.530	10.000	9.870	21.600	33.100	9.310	7.210	12.300	8.860	7.270
23	10.300	6.910	7.530	9.730	11.900	17.500	34.900	9.030	7.410	13.300	8.740	7.380
24	9.870	6.910	7.650	8.610	13.600	14.800	36.100	8.890	8.250	14.100	9.220	7.380
25	8.370	7.010	8.010	8.130	14.600	13.400	36.100	8.890	8.620	14.700	10.300	7.380
26	7.500	7.210	8.010	7.890	15.600	12.800	35.500	8.890	8.040	15.100	11.400	7.160
27	7.000	7.650	7.650	8.010	16.300	11.900	35.500	9.310	7.600	15.300	12.200	7.060
28	6.500	7.650	7.530	8.490	17.200	10.600	33.700	9.870	7.600	15.300	12.500	6.960
29	6.500	7.410	7.410	9.170		9.730	33.100	9.870	8.040	15.300	12.500	6.960
30	7.000	7.210	7.410	9.170		9.450	31.900	9.450	9.480	15.300	12.200	7.060
31	7.500		7.530	8.370		9.450		8.890		15.300	12.500	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE	SOUTH CAROLINA
MAJOR BASIN	SOUTHEAST
MINOR BASIN	SAVANNAH RIVER
STATION LOCATION	SAVANNAH RIVER AT NORTH AUGUSTA, SOUTH CAROLINA 48

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	24	60*	11	3	0	1	1	0	0	0									
11	29	60*	12	12	0	0	0	0	0	0									
12	26	60*	1	12	0	0	0	0	0	0									
1	17	61*	2	24	0	0	0	0	2	2									
2	28	61*	3	16	0	0	0	0	0	0									
3	27	61*	4	6	0	0	0	0	0	0									
4	25	61*	5	8	0	0	0	0	0	0									
5	16	61*	5	23	0	0	0	0	0	0									
6	5	61	7	21	0	0	0	0	0	0									
7	31	61*	8	25	0	0	0	0	0	0									
8	28	61*	9	21	0	0	0	0	0	0									
9	5	61	9	29	-	-	-	4	1	5									
9	11	61	10	5	-	-	-	0	5	5									
9	19	61	10	27	0	0	0	5	7	12									
9	26	61	10	13	-	-	-	0	0	0									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE SOUTH CAROLINA
MAJOR BASIN SOUTHEAST
MINOR BASIN SAVANNAH RIVER
STATION LOCATION SAVANNAH RIVER AT NORTH AUGUSTA, SOUTH CAROLINA 48

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	3	60								20				43	20	65	20	57	10	62	10	60			3				-----
11	7	60	100						50	20	20	40	20	57	20	65	10	56	10	66	10	50	150						-----
12	6	60	100					50		20	20			57	10	56	10	22	10	20	10	60			1				-----
1	2	61	100								90	20	70	65	40	57	20	93	10	28	10	30		10					-----
1	17	61	200				20	20			180		160	65	30	57	20	92	10	26	10	40	20		2				-----
2	6	61	400				20	70		70	200	50	20	92	30	2	10	43	10	65	10	40			3	2			-----
2	21	61	1200	20		20	20			50	1120	20	490	92	40	65	20	95	*	90	*	40	20	10			2		--77-
3	6	61	100					20			90	50	70	57	20	56	10	43	10	92	10	60	20						-----
3	20	61	500					250		180	40	20	20	82	70	56	10	62	*	92	*	20					3		-----
4	4	61	400					70	20	220	110	40	160	57	20	56	10	62	10	92	10	60	40	10	15	5			-----
4	18	61	200							80	80	20	80	57	30	56	10	62	10	2	10	50							-----
5	1	61	100							90	20	20		57	30	56	20	58	10	65	10	40			4		1		-----
5	16	61	100			20		20		70			70	57	20	56	20	62	10	97	10	40			9		1		-----
6	5	61	200					20		120	60		80	57	30	56	30	58	10	82	*	30			3		2		-----
7	3	61	500					40	20	350	100		20																-----7
7	19	61	100							120	20	20	60	57	40	58	20	56	10	62	10	30							-----
8	21	61	200		40	60		40		40	20	40																	-----
9	5	61	200			60		40		40	60	20	80	43	20	57	10	2	10	56	10	60							-----
9	19	61								20	20	20		57	20	56	10	58	10	65	10	60			2				-----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE SOUTH CAROLINA
MAJOR BASIN SOUTHEAST
MINOR BASIN SAVANNAH RIVER
STATION LOCATION SAVANNAH RIVER AT NORTH AUGUSTA, SOUTH CAROLINA 48

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	3	60	10	16	5144	185	71	114	6	21	13	1	1	10	1	7	6	1	17
10	30	60	11	29	4586	184	46	138	1	12	13	1	1	10	1	5	2	0	13
1	2	61	1	16	3802	227	59	168	2	14	15	1	1	12	1	6	4	1	17
2	6	61	2	20	3874	248	107	141	6	31	19	1	1	16	1	10	10	1	30
3	8	61	3	19	3384	259	99	160	7	30	16	1	1	14	0	9	9	1	27
5	1	61	5	15	4804	214	75	139	4	25	15	1	1	13	0	7	8	1	15
9	4	61	9	13	7098	105	38	67	1	10	11	2	1	8	0	3	2	0	11

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE SOUTH CAROLINA

MAJOR BASIN SOUTHEAST

MINOR BASIN SAVANNAH RIVER

STATION LOCATION SAVANNAH RIVER AT NORTH AUGUSTA, SOUTH CAROLINA 48

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	22.1	-	6.9	-	-	-	-	-	3	24	14	-	9	-	-	-	-
10	10	60	22.1	-	6.9	-	-	-	-	-	4	24	16	-	7	-	-	-	-
10	18	60	21.9	-	6.8	-	-	-	-	-	3	22	16	-	8	-	-	-	-
10	24	60	20.1	-	6.9	-	-	-	-	-	-	22	18	-	7	-	-	-	-
10	31	60	19.5	-	7.0	-	-	-	-	-	3	20	14	-	18	-	-	-	-
11	7	60	17.0	-	7.1	-	-	-	-	-	3	20	14	-	8	-	-	-	-
11	29	60	17.0	-	6.9	-	-	-	-	-	3	26	16	-	7	-	-	-	-
12	6	60	11.9	-	6.9	-	-	-	-	-	3	24	20	-	8	-	-	-	-
12	12	60	11.9	-	7.1	-	-	-	-	-	3	22	20	-	15	-	-	-	-
12	20	60	10.9	-	6.9	-	-	-	-	-	3	22	24	-	8	-	-	-	-
12	26	60	9.3	-	6.9	-	-	-	-	-	3	24	14	-	8	-	-	-	-
1	2	61	10.2	-	6.9	-	-	-	-	-	3	24	18	-	8	-	-	-	66
1	10	61	8.0	-	6.9	-	-	-	-	-	4	26	26	-	8	-	-	-	-
1	17	61	9.0	-	7.1	-	-	-	-	-	4	30	36	-	15	-	-	-	-
1	30	61	9.0	-	7.0	-	-	-	-	-	3	24	36	-	8	-	-	-	-
2	6	61	8.5	-	6.7	-	-	-	-	-	3	14	32	-	8	-	-	-	170
2	13	61	9.1	-	6.8	-	-	-	-	-	3	12	30	-	30	-	-	-	-
2	21	61	13.0	-	6.7	-	-	-	-	-	4	26	28	-	55	-	-	-	-
2	28	61	12.1	-	6.4	-	-	-	-	-	4	18	28	-	65	-	-	-	-
3	6	61	16.6	-	6.7	-	-	-	-	-	4	24	38	-	25	-	-	-	-
3	13	61	13.3	-	6.8	-	-	-	-	-	3	24	22	-	40	-	-	-	-
3	20	61	13.1	-	6.9	-	-	-	-	-	3	22	16	-	22	-	-	-	-
3	27	61	13.9	-	6.9	-	-	-	-	-	4	24	20	-	30	-	-	-	-
4	4	61	13.2	-	6.7	-	-	-	-	-	3	20	32	-	40	-	-	-	-
4	11	61	13.9	-	6.9	-	-	-	-	-	5	28	28	-	30	-	-	-	-
4	17	61	14.9	-	6.7	-	-	-	-	-	3	20	14	-	50	-	-	-	-
4	25	61	18.0	-	6.9	-	-	-	-	-	3	24	14	-	30	-	-	-	-
5	1	61	15.9	-	6.7	-	-	-	-	-	4	24	14	-	40	-	-	-	-
5	8	61	18.1	-	6.7	-	-	-	-	-	4	24	24	-	45	-	-	-	-
5	16	61	18.5	-	6.8	-	-	-	-	-	3	22	22	-	50	-	-	-	-
6	5	61	22.2	-	7.1	-	-	-	-	-	4	26	14	-	40	-	-	-	-
7	3	61	24.0	-	6.9	-	-	-	-	-	3	24	16	-	45	-	-	-	-
7	17	61	23.5	-	7.0	-	-	-	-	-	3	24	18	-	30	-	-	-	-
7	31	61	25.0	-	7.0	-	-	-	-	-	3	24	22	-	30	-	-	-	-
8	14	61	23.9	-	7.1	-	-	-	-	-	3	26	18	-	25	-	-	-	-
8	21	61	19.9	-	6.7	-	-	-	-	-	3	22	24	-	30	-	-	-	-
8	28	61	22.5	-	7.1	-	-	-	-	-	3	26	18	-	30	-	-	-	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE SOUTH CAROLINA

MAJOR BASIN SOUTHEAST

MINOR BASIN SAVANNAH RIVER

STATION LOCATION SAVANNAH RIVER AT

NORTH AUGUSTA, SOUTH CAROLINA 48

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
9	5	61	23.7	-	7.1	-	-	-	-	-	3	26	24	-	20	-	-	-	-
9	11	61	22.0	-	7.4	-	-	-	-	-	3	26	18	0	15	0	.0	0	-
9	19	61	19.8	-	7.0	-	-	-	-	-	3	28	20	-	15	-	-	-	-
9	26	61	23.0	-	7.2	-	-	-	-	-	3	26	18	-	12	-	-	-	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Augusta, Georgia
Operated by U.S. Geological Survey

STATE — South Carolina

MAJOR BASIN — Southeast

MINOR BASIN — Savannah River

STATION LOCATION — Savannah River at North Augusta, South Carolina

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	5.900	5.680	6.010	5.570	5.680	19.700	25.300	10.100	5.900	12.400	6.010	16.700
2	5.790	6.010	6.560	5.570	6.670	19.200	30.000	12.800	6.780	5.570	6.560	14.100
3	6.120	6.230	5.790	5.570	7.330	18.000	21.800	14.200	5.900	5.240	6.340	6.340
4	5.900	6.230	5.680	6.120	5.680	14.000	26.400	11.700	5.460	5.460	7.110	5.790
5	5.790	5.790	5.570	7.110	5.460	7.700	28.200	7.000	5.570	5.570	6.340	7.690
6	5.790	5.680	5.570	7.220	5.460	9.870	27.000	6.340	5.460	6.120	5.240	15.100
7	5.790	5.680	5.570	5.680	5.570	13.900	18.300	6.890	5.680	5.900	5.240	15.100
8	5.900	5.570	6.120	5.460	7.620	26.100	13.200	6.120	6.890	5.130	6.120	15.100
9	6.010	5.680	6.780	5.460	9.510	29.500	6.330	6.670	7.000	4.930	7.660	11.700
10	5.790	6.340	5.790	5.460	7.110	28.200	6.730	9.270	5.680	5.030	5.790	6.010
11	5.790	6.780	5.570	6.010	5.570	25.800	8.800	8.430	5.350	5.570	6.010	5.900
12	6.010	5.680	5.790	7.000	5.460	18.600	10.600	8.210	5.460	6.120	5.900	6.450
13	6.670	5.680	5.790	6.890	5.460	16.200	20.800	7.000	5.460	6.230	5.030	7.440
14	6.890	5.570	6.120	5.900	5.460	11.200	22.200	7.220	6.010	6.340	5.030	7.770
15	5.790	5.570	7.000	6.010	6.120	10.100	24.700	6.120	6.780	5.350	6.340	6.450
16	5.570	5.680	7.110	5.900	7.550	9.390	30.300	8.100	6.780	5.130	8.100	5.680
17	5.900	6.120	6.010	6.230	6.450	8.580	28.500	7.660	5.570	5.460	8.550	5.570
18	9.870	6.670	5.680	7.880	5.350	5.640	29.100	7.000	5.350	9.670	8.210	5.570
19	10.500	5.790	5.680	8.100	5.460	5.460	28.300	6.670	5.350	19.800	5.570	5.570
20	10.400	5.570	5.570	8.100	8.060	5.740	29.400	5.460	5.570	19.000	5.350	5.570
21	9.870	5.680	5.570	5.680	13.400	6.330	30.000	5.460	6.230	20.000	5.900	6.010
22	6.340	5.570	6.120	5.460	14.500	6.530	29.700	5.570	8.210	15.000	7.660	6.450
23	5.790	5.680	6.340	5.460	12.200	6.830	29.100	5.680	6.450	6.230	8.550	5.570
24	5.680	6.340	5.680	5.460	15.200	7.260	21.000	6.230	5.240	8.160	7.770	5.790
25	5.570	6.560	5.570	5.900	28.300	5.260	17.000	7.550	5.350	14.700	8.430	5.680
26	5.680	5.680	5.570	7.220	28.300	5.260	15.500	7.330	5.570	14.100	7.660	5.790
27	6.120	5.680	5.460	7.770	23.200	5.360	17.700	5.900	6.350	14.000	6.120	5.790
28	7.220	5.680	5.570	5.460	16.500	5.170	23.400	6.010	11.200	12.600	9.110	6.450
29	5.900	5.570	6.230	5.460		5.550	20.400	5.680	12.800	8.310	17.300	6.010
30	5.790	5.570	6.670	5.570		6.330	13.200	6.230	18.100	5.790	17.000	5.900
31	5.790		5.680	5.460		8.690		5.570		5.130	16.700	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE PENNSYLVANIA

MAJOR BASIN NORTH ATLANTIC

MINOR BASIN DELAWARE-SCHUYLKILL RIVERS

STATION LOCATION SCHUYLKILL RIVER AT PHILADELPHIA, PENNSYLVANIA 74

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	3	60	10	20	0	0	0	0	0	0							
10	17	60	11	1	0	2	2	0	1	1							
11	7	60	11	25	0	0	0	0	0	0							
11	21	60	12	1	0	3	3	0	8	8							
12	5	60	12	22	0	1	1	0	0	0							
12	20	60	1	13	0	1	1	0	0	0							
1	3	61	1	25	1	1	2	0	0	0							
1	16	61	2	1	0	1	1	0	0	0							
2	6	61	2	23	0	0	0	0	0	0							
2	20	61	3	7	3	0	3	0	0	0							
3	6	61	3	27	0	0	0	0	5	5							
3	20	61	4	3	0	0	0	0	0	0							
4	17	61*	5	23	1	0	1	0	0	0							
5	15	61*	6	23	1	0	1	0	0	0							
6	19	61*	7	21	0	0	0	0	0	0							
7	17	61*	8	28	0	0	0	6	7	13							
8	21	61	11	3	1	0	1	2	7	9							
9	5	61	10	3	-	-	-	0	0	0							
9	18	61	10	26	-	-	-	5	6	11							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE PENNSYLVANIA
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN DELAWARE-SCHUYLKILL RIVERS
STATION LOCATION SCHUYLKILL RIVER AT
PHILADELPHIA, PENNSYLVANIA 74

DATE OF SAMPLE: MONTH	DAY	YEAR	ALGAE (Number per ml.): TOTAL	BLUE-GREEN: COCCOID	BLUE-GREEN: FILAMENTOUS	GREEN: COCCOID	GREEN: FILAMENTOUS	FLAGELLATES (Pigmented): GREEN	FLAGELLATES (Pigmented): OTHER	DIATOMS: CENTRIC	DIATOMS: PENNATE	INERT DIATOM SHELLS (No. per ml.): CENTRIC	INERT DIATOM SHELLS: PENNATE	DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*): FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE	OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES: PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	DOMINANT GENERA (See Introduction for Identification)
10	3	60	400			70		110	20	110	110	90	250	70	10	93	10	26	10	16	10	70	110		2				-----
11	7	60	1100		20			200	70	290	550	70	640	70	20	26	10	2	10	64	10	50	420		4	2	1		--96-
12	5	60	1100					130		50	870	70	340	92	70	56	10	70	10	82	*	20		10	1				---7-
1	3	61	4600		20	20	50			180	4340	270	2840	92	20	65	10	70	10	62	10	50	20	10	3	3	8		74763
2	6	61	400							20	380			94	20	92	10	70	10	65	*	50	20						-----
3	6	61	600							20	560	50	220										50						--7--
4	3	61	1400			40		180		470	690		380	93	10	82	10	88	10	62	10	70	50		1		3		--9-3
5	1	61	2100			40		230		390	1410	60	680	70	10	82	10	65	10	93	10	80			6				7-76-
6	5	61	8200	40	230	330		5360	20	1410	810	120	540	62	10	70	10	47	10	26	10	70		10	1				4193-
7	3	61	8300	90		6280		870	540	70	470	200	1410	62	10	36	10	92	10	65	10	70		20	74	2	2		-8-35
7	18	61	2200			540		80		350	1180	170	1120	62	10	47	10	92	10	36	10	60			1	3			7876-
9	5	61	1200	60	20	230		170		100	600	20	350	70	10	93	10	26	10	62	10	70			22		3	1	-8-6-
9	18	61	7300			5470		580		270	1040		1140	62	20	26	10	36	10	92	10	60			56		1		4873-

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE PENNSYLVANIA
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN DELAWARE-SCHUYLKILL RIVERS
STATION LOCATION SCHUYLKILL RIVER AT PHILADELPHIA, PENNSYLVANIA 74

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
11	15	60	11	26	5363	187	53	134	1	10	23	3	2	17	1	7	4	1	7
12	20	60	1	19	4997	344	211	133	4	40	103	20	12	64	7	28	13	4	19
1	30	61	2	17	6000	239	109	130	2	21	49	10	7	30	2	17	8	2	10
9	5	61	9	18	4780	287	147	140	2	19	82	18	10	49	5	21	12	3	8

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE PENNSYLVANIA

MAJOR BASIN NORTH ATLANTIC

MINOR BASIN DELAWARE SCHUYLKILL RIVERS

STATION LOCATION SCHUYLKILL RIVER AT PHILADELPHIA, PENNSYLVANIA 74

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	27.2	8.8	7.5	1.0	-	2.9	3.8	.2	12	52	128	30	12	64	.3	203	1100
10	10	60	17.8	9.8	7.6	1.5	5	2.0	2.9	.1	15	60	144	17	10	73	.2	223	1400
10	17	60	19.4	8.8	7.6	1.4	4	1.6	3.6	.1	15	67	148	13	8	87	.3	241	1600
10	24	60	14.4	10.2	7.6	1.4	8	1.9	3.6	.2	11	70	160	18	13	73	.3	243	1200
10	31	60	13.9	10.8	7.6	1.2	11	1.9	3.9	.2	17	70	160	23	12	88	.5	126	2600
11	7	60	12.2	11.6	7.6	1.0	8	2.9	4.9	.2	14	70	142	25	8	71	.4	203	200
11	14	60	10.0	12.8	7.6	1.0	13	3.1	5.6	.2	11	61	132	23	15	96	.4	209	2300
11	21	60	12.8	11.8	7.4	1.2	9	2.6	4.9	.1	16	66	150	23	12	78	.4	231	430
11	28	60	11.7	13.0	17.5	.8	12	2.6	6.2	.2	16	69	140	18	10	71	.4	230	7900
12	5	60	8.9	14.2	7.6	3.0	12	3.4	5.9	.3	26	69	160	33	8	67	.5	238	670
12	12	60	3.3	12.0	7.8	1.6	11	5.9	9.1	.4	20	70	156	18	7	78	.8	235	-
12	13	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4200
12	19	60	3.3	12.6	7.3	1.0	10	1.9	7.9	.6	22	75	144	15	8	84	.7	235	-
12	27	60	2.8	12.8	7.3	1.4	10	2.6	12.6	.5	23	76	152	15	8	60	.6	220	4400
1	3	61	2.8	12.8	7.1	4.2	18	1.9	8.6	.6	14	41	116	35	45	43	.3	134	-
1	9	61	3.9	11.6	7.3	2.6	9	.8	1.9	.6	15	60	108	18	12	52	.5	170	-
1	16	61	4.4	11.4	7.4	1.0	8	.3	1.6	.6	18	62	140	8	8	61	.5	190	2400
1	23	61	1.1	13.2	7.3	1.7	10	.9	1.8	.4	14	58	114	18	8	61	.5	193	660
1	30	61	1.1	12.8	7.4	-	9	1.6	1.6	.6	16	62	130	12	7	57	.6	195	-
2	6	61	1.1	13.2	7.5	1.4	10	.6	.9	.8	15	67	138	7	8	61	.4	228	2200
2	14	61	4.4	12.2	7.4	.8	7	2.2	2.8	.8	17	70	128	8	7	63	.4	208	960
2	20	61	6.1	13.8	7.3	4.4	49	.9	.9	.4	8	39	70	220	380	27	.3	128	7000
2	27	61	5.0	12.4	7.1	2.1	84	1.6	3.6	.3	5	31	60	230	330	31	.1	98	7900
3	6	61	13.9	11.2	7.3	1.2	9	1.9	2.6	.4	8	43	88	15	12	52	.2	160	4400
3	13	61	6.1	12.6	7.4	-	5	1.9	3.0	.2	7	39	102	12	8	59	.2	176	730
3	20	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21000
3	27	61	8.3	11.4	7.4	.3	8	1.9	3.4	.2	10	44	102	22	12	61	.2	203	2800
4	3	61	7.2	11.9	7.6	.9	5	2.4	3.9	.2	9	49	122	10	8	68	.3	172	1500
4	10	61	10.0	10.2	7.6	.5	6	2.2	2.6	.1	11	52	118	10	8	57	.3	183	770
4	17	61	10.0	11.2	7.3	.8	12	2.1	3.6	.1	5	40	78	28	30	42	.2	135	5700
4	24	61	15.6	10.8	7.5	1.2	7	1.8	3.4	.1	9	46	103	15	14	47	.2	153	3800
5	1	61	10.0	9.5	7.4	3.9	14	2.6	5.2	.1	12	47	92	28	22	54	.4	170	3900
5	8	61	12.2	9.3	7.5	.2	8	2.2	4.0	.1	11	49	122	12	10	78	.3	221	2800
5	15	61	18.3	8.0	7.4	.6	9	1.9	3.9	.1	7	58	124	15	12	53	.3	212	1300
5	22	61	17.8	7.9	7.5	4.9	10	1.4	2.8	.1	6	53	138	18	18	76	.3	224	1900
5	29	61	17.8	8.1	7.5	1.2	8	2.4	3.9	.2	11	58	130	12	8	82	.5	225	1500
6	5	61	22.8	7.3	7.6	2.8	12	1.8	4.9	.0	12	69	142	18	12	82	.1	256	-
6	12	61	25.0	4.8	7.6	1.4	11	3.6	6.6	.2	16	63	126	22	18	89	.5	238	9800
6	19	61	23.9	8.0	7.7	1.8	14	2.6	6.9	.0	15	80	144	37	28	74	.5	282	3900
6	26	61	25.0	5.7	7.4	1.2	10	2.6	3.6	.1	19	77	148	18	17	87	.5	278	7500

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE PENNSYLVANIA
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN DELAWARE SCHUYLKILL RIVERS
STATION LOCATION SCHUYLKILL RIVER AT
PHILADELPHIA, PENNSYLVANIA 74

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	3	61	27.8	6.3	7.6	1.5	12	1.9	4.8	.0	17	72	128	18	15	71	.4	232	830
7	10	61	24.4	6.9	7.7	3.1	12	1.9	6.6	.1	14	81	152	12	12	74	1.3	260	2800
7	17	61	25.0	6.7	7.5	2.4	21	3.0	3.2	.2	13	58	104	40	95	59	.4	214	11000
7	24	61	29.4	4.7	7.5	1.4	13	3.9	7.4	.1	13	66	102	50	50	51	.3	205	10000
7	31	61	26.1	6.8	7.3	1.2	15	2.9	6.6	.1	9	48	74	35	60	25	.4	143	4300
8	7	61	28.3	6.7	7.5	.4	11	2.4	4.0	.1	10	47	144	22	40	101	.3	247	2300
8	14	61	26.7	6.0	7.7	1.1	10	1.8	4.6	.1	18	62	140	27	30	94	.3	269	2400
8	21	61	24.4	5.5	7.5	1.5	12	2.9	4.9	.1	19	73	158	22	20	109	.5	300	3600
8	28	61	27.2	6.1	7.5	.6	10	2.6	5.8	.1	14	58	180	22	20	130	.4	327	3300
9	5	61	28.9	5.4	7.6	.4	8	–	–	.2	16	50	142	25	20	117	.5	290	2000
9	11	61	28.3	6.0	7.6	.4	7	–	–	.1	18	65	148	32	30	–	.5	–	3700
9	18	61	23.3	6.5	7.6	1.3	12	2.6	4.8	.0	21	73	178	38	30	95	.6	312	3800
9	25	61	28.3	6.0	7.6	1.4	7	–	–	.1	18	65	148	32	30	79	.5	268	7100

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Philadelphia, Pennsylvania
Operated by U.S. Geological Survey

STATE Pennsylvania

MAJOR BASIN North Atlantic

MINOR BASIN Delaware-Schuylkill Rivers

STATION LOCATION Schuylkill River at Philadelphia, Pennsylvania

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	2.340	1.160	1.630	3.680	1.160	8.650	4.040	3.340	1.500	.892	2.590	1.590
2	2.100	1.730	1.330	6.400	1.080	7.400	4.440	3.440	1.370	.929	2.150	1.370
3	1.820	1.540	.892	4.390	1.000	6.180	3.710	3.710	1.500	.929	1.910	1.330
4	1.630	1.160	.929	3.190	1.040	5.340	3.290	3.080	1.370	.855	2.200	1.450
5	1.500	1.080	.929	2.490	1.000	5.340	3.080	2.780	1.410	.744	3.260	1.240
6	1.410	1.040	.929	2.050	1.120	5.220	3.990	2.640	1.240	.670	2.540	1.040
7	1.370	1.000	.929	2.010	1.530	5.580	2.780	2.930	1.160	.638	2.200	1.000
8	1.290	.966	.892	2.440	1.770	6.270	2.590	3.080	1.160	.638	1.820	1.000
9	1.200	.929	.818	2.290	1.730	11.000	2.440	4.540	1.730	.606	1.500	.892
10	1.120	1.770	.800	1.860	1.370	8.690	4.570	4.800	1.410	.606	1.290	.818
11	1.040	3.080	.760	1.680	1.410	6.430	5.920	4.390	1.630	.542	1.200	.744
12	1.120	2.100	.710	1.590	1.330	5.640	4.440	4.100	1.450	.510	1.500	.707
13	1.000	1.730	.740	1.500	1.200	5.100	12.900	4.330	1.160	1.290	1.450	.606
14	.966	1.450	.800	1.500	1.240	7.330	14.600	3.820	1.590	1.450	1.160	.829
15	.929	1.330	.880	1.770	1.540	7.140	9.140	3.390	1.120	2.050	.966	1.030
16	.929	1.240	.880	2.730	2.050	5.700	8.160	3.880	1.040	3.210	.892	.707
17	.892	1.160	.900	2.200	2.440	4.860	9.350	3.440	.966	2.640	.855	.606
18	.855	1.080	.890	1.600	3.030	4.220	7.600	2.930	.818	1.500	.744	.510
19	.855	1.000	.810	1.300	10.300	6.490	6.500	2.640	.744	1.160	.707	.510
20	2.160	.966	.740	1.300	13.100	6.300	5.580	2.590	.670	2.800	.804	.555
21	2.050	.966	1.300	1.400	10.200	4.740	4.920	2.440	.855	3.190	1.730	1.160
22	1.540	.929	1.600	1.300	7.400	4.100	4.330	2.250	1.290	1.910	1.240	.781
23	1.160	.929	1.330	1.800	10.100	5.160	4.440	2.100	1.760	1.290	1.910	.606
24	1.040	.892	1.000	3.000	10.400	7.340	4.440	1.960	1.680	1.210	1.910	.510
25	1.000	.892	.740	4.500	13.600	5.400	3.820	1.860	1.680	2.680	1.860	.414
26	.966	.892	.800	2.500	20.800	4.740	5.490	1.960	1.450	4.640	1.490	.350
27	.892	.855	.850	1.700	16.000	4.390	4.620	2.390	1.730	2.680	3.540	.325
28	.929	.818	.760	1.550	10.800	4.160	3.710	2.200	1.370	1.910	3.440	.325
29	1.450	1.010	.800	1.450		4.160	5.260	1.770	1.160	7.770	2.540	.300
30	1.120	1.580	.760	1.350		4.040	3.930	1.680	1.000	7.400	2.100	.300
31	.929		.940	1.250		3.550		1.680		3.680	1.910	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE VIRGINIA

MAJOR BASIN NORTH ATLANTIC

MINOR BASIN POTOMAC RIVER

STATION LOCATION SHENANDOAH RIVER AT BERRYVILLE, VIRGINIA 87

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER			
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY			
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL	
MO.	DAY	YEAR	MONTH	DAY	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$		MO.	DAY	$\mu\mu c/g$	$\mu\mu c/g$		$\mu\mu c/l$	$\mu\mu c/l$	$\mu\mu c/l$	
9	12	61	10	6	1	0	1	8	5	13										
9	18	61	10	19	0	0	0	1	10	11										
9	25	61	10	12	0	1	1	3	14	17										

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE VIRGINIA
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN POTOMAC RIVER
STATION LOCATION SHENANDOAH RIVER AT
BERRYVILLE, VIRGINIA 87

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
			TOTAL	BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR		COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFIERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
9	12	61	30600	350		10080		3290	20	10640	6230	7930	2650	71	30	23	30	26	10	70	10	20			25	1			48-65

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE VIRGINIA
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN POTOMAC RIVER
STATION LOCATION SHENANDOAH RIVER AT
BERRYVILLE, VIRGINIA

87

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
9	18	61	22.2	8.6	8.3	-	-	-	-	-	9	138	164	-	20	-	-	237	*40
9	25	61	23.5	5.5	8.2	-	-	-	-	-	10	134	160	5	20	-	-	243	270

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Millville, West Virginia
Operated by U.S. Geological Survey

STATE	Virginia
MAJOR BASIN	North Atlantic
MINOR BASIN	Potomac River
STATION LOCATION	Shenandoah River at Berryville, Virginia

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	.760	.664	.541	.851	.600	7.740	4.410	2.780	1.810	1.250	.706	.990
2	.775	.644	.565	.899	.590	6.220	5.280	2.830	1.700	1.090	.674	.837
3	.739	.613	.547	1.040	.590	5.210	5.710	3.010	1.600	1.040	.658	.786
4	.739	.607	.571	1.000	.600	4.470	5.130	2.980	1.510	1.080	.846	.714
5	.704	.601	.571	1.000	.620	4.010	4.610	2.830	1.520	1.050	.873	.682
6	.632	.577	.541	.920	.680	3.800	4.080	2.690	1.420	1.060	1.120	.762
7	.670	.619	.505	.798	.740	3.650	3.610	2.700	1.410	1.050	1.050	1.160
8	.677	.553	.535	.770	.820	3.580	3.230	3.090	1.380	1.150	1.360	1.130
9	.632	.607	.529	.760	.900	3.990	2.940	3.870	1.590	1.060	1.050	.945
10	.690	.595	.511	.760	.900	4.710	4.350	4.010	2.220	1.060	.918	.722
11	.670	.565	.510	.746	.900	4.770	7.040	4.200	3.280	1.170	.828	.927
12	.684	.583	.500	.697	.900	4.230	8.440	5.540	2.600	1.020	.945	.909
13	.670	.571	.480	.697	.950	3.740	12.100	10.100	2.290	.918	.918	.855
14	.677	.613	.460	.625	1.000	3.420	23.800	12.200	1.940	1.120	.722	.762
15	.632	.559	.500	.658	1.200	3.210	17.600	10.200	1.940	1.250	.738	.674
16	.638	.583	.600	.828	1.600	3.060	12.800	7.670	2.020	1.040	.706	.594
17	.553	.559	.600	.958	2.400	2.910	11.600	6.150	1.860	.999	.629	.574
18	.577	.565	.590	.974	3.800	2.660	13.000	5.260	1.740	1.060	.643	.574
19	.595	.547	.580	1.140	13.000	2.600	9.800	4.510	1.590	.918	.601	.567
20	.644	.553	.580	1.200	23.000	2.540	7.380	3.970	1.390	.936	.601	.560
21	.632	.577	.580	.983	16.900	2.520	6.000	3.540	1.300	.855	.636	.594
22	.664	.541	.570	.891	10.500	2.960	5.170	3.180	1.480	.927	.643	.666
23	.638	.535	.560	.780	9.510	3.950	4.690	2.910	1.720	.819	.650	.864
24	.638	.529	.560	.730	10.800	6.310	4.270	2.660	1.660	.918	.636	1.030
25	.601	.535	.560	.700	11.200	7.770	3.910	2.450	1.560	1.310	.714	.846
26	.607	.535	.651	.670	12.600	8.140	3.690	2.290	1.470	1.040	.864	.762
27	.589	.535	.684	.650	15.600	7.530	3.420	2.150	1.350	1.120	.674	.650
28	.577	.541	.700	.630	10.900	6.420	3.210	2.040	1.410	.900	.836	.594
29	.577	.583	.720	.620		5.560	3.070	1.960	1.260	.828	1.410	.541
30	.589	.583	.739	.610		4.820	2.910	1.930	1.310	.810	1.070	.548
31	.583		.753	.600		4.250		1.780		.828	.762	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE WASHINGTON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN MIDDLE AND LOWER SNAKE RIVER

STATION LOCATION SNAKE RIVER AT

WAWAWAI, WASHINGTON 49

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	µµc/l	µµc/l	µµc/l	µµc/l	µµc/l	µµc/l	MO.	DAY	µµc/g	µµc/g	µµc/l	µµc/l	µµc/l
10	24	60*	11	7	0	4	4	0	0	0							
11	28	60*	12	12	0	3	3	0	4	4							
12	28	60*	1	12	0	6	6	0	0	0							
1	31	61*	2	13	0	3	3	0	0	0							
2	27	61*	3	17	0	1	1	0	0	0							
3	27	61*	4	13	0	1	1	0	0	0							
4	24	61*	5	11	0	1	1	0	3	3							
5	29	61*	6	12	0	1	1	0	14	14							
6	26	61*	7	14	0	1	1	0	3	3							
7	31	61*	8	23	0	1	1	1	7	8							
8	28	61*	9	14	0	1	1	0	19	19							
9	5	61	10	3	-	-	-	0	8	8							
9	11	61	10	19	-	-	-	3	8	11							
9	18	61	10	5	-	-	-	0	0	0							
9	25	61	10	10	0	3	3	1	13	14							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE WASHINGTON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN MIDDLE AND LOWER SNAKE RIVER

STATION LOCATION SNAKE RIVER AT WAWAWAI, WASHINGTON 49

DATE OF SAMPLE			ALGAE (Number per ml.)	BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS		INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)											MICROINVERTEBRATES				
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE	OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	PROTOZOA (No. per ml.)	ROTIFIERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	DOMINANT GENERA (See Introduction for Identification)
10	10	60	600		20			50	20	50	510	20	500	2	20	58	10	64	10	70	10	60	40		4				-----
10	17	60	600						20	130	420	40	440	70	10	2	10	58	10	64	10	50	110						-----
11	14	60	1300							70	1230	70	1030	70	10	2	10	36	10	64	10	60		10			1		--763
12	5	60	300			20					220	30	600	36	10	41	10	70	10	64	*	70	30		1		2		-----
12	19	60	600							130	470	200	450	70	20	2	10	36	10	71	10	50							-----
1	3	61	400							50	310	160	160	9	10	70	10	82	10	71	10	60	20			1	2		-----
1	16	61	300								310	50	340	70	20	71	10	65	10	36	10	70		10	4				-----
2	6	61	800					20		20	780	90	960	36	10	41	10	97	10	70	10	60	20				4		-----
2	20	61	900				20	20	20	160	650	1030	720	70	10	92	10	93	10	76	10	70		20	6				9----
3	6	61	1500			40				600	840	840	670	82	10	92	10	2	10	76	10	60					2		--97-
3	20	61	1400				20	20		330	1020	640	760	2	10	82	10	70	10	9	10	60	70		1		2		3-963
4	3	61	1700	20	20		40			640	1000	530	690	2	10	92	10	82	10	70	10	70	160		18		1		7-963
4	17	61	500							150	370	40	350	2	10	9	10	92	10	80	10	60		10	30				-----
5	1	61	2300				20	40		970	1260	150	1100	80	20	92	10	9	10	2	10	50			4		4		3-973
5	15	61	800				20			20	760	70	650	2	10	92	10	47	10	89	10	70			7		1	1	3--7-
6	5	61	400			20				150	270	40	520	80	10	89	10	47	10	2	10	60							-----
6	19	61	200		20					90	70		180	2	20	16	10	80	10	15	10	60			3			1	-----
7	3	61	1600	20		80		80		250	1140	40	560	92	20	2	10	26	10	62	10	50	40		4				---73
7	17	61	1400			100		60		540	660	120	310	47	20	2	10	92	10	36	10	40			10			2	74943
8	7	61	1500	40	40	130		100		330	890	80	540	92	50	47	30	36	*	58	*	20			3				---7-
8	21	61	1300	20		120		40		270	830	20	270	92	60	70	10	46	*	2	*	30			2				---7-
9	5	61	400						20	110	250	50	270	92	30	70	10	46	10	2	10	50			9	3			-----
9	18	61	800			60		40		40	640	60	480	92	30	36	10	64	10	2	10	50	120		14	3			-----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE WASHINGTON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN MIDDLE AND LOWER SNAKE RIVER

STATION LOCATION SNAKE RIVER AT

WAWAWAI, WASHINGTON 49

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	3	60	10	17	2909	237	52	185	1	11	23	1	2	18	2	7	3	1	6
11	7	60	11	21	6930	86	25	61	1	5	10	1	1	7	1	3	1	1	4
12	13	60	12	26	5370	125	24	101	2	4	9	1	1	6	1	5	1	0	3
1	16	61	2	13	4570	141	35	106	1	7	12	1	1	9	1	4	2	0	9
6	5	61	6	13	3440	145	75	70	1	21	15	2	1	12	0	8	8	1	21

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE WASHINGTON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN MIDDLE AND LOWER SNAKE RIVER

STATION LOCATION SNAKE RIVER AT WAWAWAI, WASHINGTON

49

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	3	60	-	-	-	-	-	1.5	2.9	-	-	-	-	-	20	-	-	-	130
10	10	60	15.0	-	7.9	-	7	1.9	5.2	.0	17	124	125	18	20	55	-	223	200
10	17	60	13.0	10.1	8.0	1.7	8	.6	2.2	.0	16	128	126	17	20	49	-	238	1100
10	24	60	12.3	9.9	7.8	1.6	7	.5	1.7	.0	16	137	134	17	2	51	-	212	800
10	31	60	11.7	10.6	8.1	3.4	7	1.3	3.0	.0	16	114	121	16	20	44	-	203	430
11	7	60	10.8	10.1	8.0	1.7	8	1.5	5.0	.1	18	126	130	18	20	59	-	238	1400
11	14	60	9.0	10.6	7.9	3.0	7	.8	2.6	.0	16	120	126	19	4	56	-	228	550
11	21	60	8.1	11.1	8.1	2.2	6	1.0	3.7	.0	10	103	107	20	13	42	-	165	66
11	28	60	6.0	11.2	7.5	3.6	7	1.6	6.7	.0	11	96	93	20	12	43	-	186	1300
12	5	60	3.5	10.9	7.8	4.3	8	.6	1.3	.0	17	117	114	18	1	41	-	226	700
12	12	60	4.0	11.2	8.1	3.7	8	.8	2.3	.0	18	128	123	17	1	54	-	237	380
12	19	60	3.5	12.2	8.1	5.6	6	1.2	3.7	.0	19	141	132	19	2	50	-	227	14000
12	28	60	2.0	13.3	7.5	5.5	30	1.2	4.7	.0	11	126	125	20	4	47	-	211	300
1	3	61	2.0	13.5	7.6	4.3	9	.7	1.9	.0	17	136	135	20	0	55	-	248	2700
1	9	61	4.5	13.8	7.8	5.4	7	.9	2.8	.0	16	129	125	18	1	51	-	242	310
1	16	61	8.0	12.8	7.6	2.7	8	1.3	3.3	.0	17	118	115	18	5	51	-	216	300
1	23	61	4.5	13.1	7.8	4.5	9	.9	3.0	.0	16	116	112	18	2	53	-	220	300
1	29	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	250
1	30	61	6.0	13.2	7.5	3.0	8	1.0	2.7	.1	19	140	139	18	1	53	-	280	-
2	6	61	8.3	11.5	7.8	4.0	13	.9	3.3	.0	12	86	86	35	31	26	-	173	330
2	13	61	6.0	11.9	7.4	3.2	14	1.0	4.2	.0	7	59	56	40	45	26	-	158	960
2	20	61	5.0	12.3	7.4	3.3	11	1.0	3.4	.0	10	80	74	40	6	26	-	175	150
2	27	61	4.5	12.5	7.0	3.1	9	1.0	3.2	.2	10	87	81	30	6	40	-	188	790
3	6	61	4.0	13.0	7.0	3.0	9	.9	2.5	.0	10	89	85	22	5	38	-	172	790
3	13	61	4.0	13.1	7.1	3.0	21	1.1	3.5	.0	10	95	90	-	35	-	-	136	120
3	20	61	5.0	10.8	6.6	3.3	10	1.2	4.2	.0	7	61	59	18	10	32	-	122	270
3	27	61	5.5	12.5	6.9	2.7	8	1.2	4.7	.0	7	69	61	18	8	33	-	114	260
4	3	61	8.0	14.0	7.0	2.8	8	.8	2.8	.0	8	70	58	18	3	-	-	113	160
4	10	61	8.0	13.6	7.2	2.3	9	1.2	3.7	.0	7	51	51	18	1	-	-	-	140
4	17	61	10.6	11.2	8.1	2.2	-	.9	3.4	-	4	51	48	-	2	13	-	90	230
4	24	61	8.2	11.3	7.7	2.1	13	1.3	5.1	.1	2	38	35	47	34	9	.1	75	1400
5	1	61	11.4	11.0	8.0	3.0	10	1.0	3.2	.0	2	37	33	21	2	8	.0	68	540
5	8	61	9.7	11.2	7.8	1.2	10	1.1	3.7	.1	1	30	29	26	2	5	.0	67	320
5	15	61	11.0	11.4	7.7	2.5	10	1.4	4.9	.0	1	28	26	21	2	7	.0	62	*33
5	22	61	-	10.4	7.5	1.9	13	1.7	5.0	.0	1	24	24	19	5	4	.0	46	33
5	29	61	11.0	10.9	7.4	2.0	13	1.4	6.4	.1	1	20	20	15	8	4	.0	50	770
6	5	61	12.8	10.6	7.5	.8	10	.6	3.4	.0	1	22	22	14	8	5	.0	48	150
6	12	61	14.4	10.2	7.7	1.8	9	.7	2.8	.0	2	30	29	14	2	7	.0	57	170
6	19	61	18.0	8.7	7.8	.6	10	1.4	3.9	.0	2	36	32	14	1	9	-	67	300
6	26	61	21.0	8.6	8.1	1.3	9	1.0	3.1	.0	3	46	42	14	1	12	.0	82	1800

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE WASHINGTON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN MIDDLE AND LOWER SNAKE RIVER

STATION LOCATION SNAKE RIVER AT WAWAWAI, WASHINGTON

49

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	3	61	21.0	8.7	8.1	1.0	9	.9	2.7	.0	4	52	50	13	2	13	.0	92	1200
7	10	61	22.6	7.9	8.1	.4	10	.6	2.9	.0	4	52	48	14	1	12	.1	92	770
7	17	61	24.4	7.6	8.1	.6	11	.9	2.4	.0	6	58	56	15	1	16	.0	108	1400
7	24	61	-	7.6	7.9	.4	11	.9	2.5	.0	8	72	66	15	1	22	.0	130	190
7	31	61	-	8.3	8.5	1.5	11	.8	3.6	.0	10	88	76	15	1	28	.0	154	330
8	7	61	23.0	8.2	8.0	.4	11	.9	1.5	-	11	90	86	15	1	30	.0	180	130
8	14	61	24.2	7.6	8.2	1.0	11	.7	2.8	-	12	96	92	15	1	33	.0	190	75
8	21	61	-	8.4	8.4	1.1	11	.9	3.9	.2	13	104	100	16	1	38	.0	198	*33
8	28	61	22.5	7.8	8.3	.6	9	.7	2.0	.9	14	100	104	15	1	42	.0	212	210
9	5	61	-	8.8	8.3	1.7	9	.8	2.8	.2	11	98	92	15	1	35	.0	180	500
9	11	61	18.0	8.8	8.3	1.4	-	.7	2.2	-	14	98	104	15	2	40	.0	202	280
9	18	61	18.0	8.4	8.4	1.9	9	1.0	2.7	.8	15	108	111	14	1	44	.0	215	-
9	25	61	16.0	10.1	8.2	1.2	9	1.0	2.8	.8	14	113	109	15	1	43	.1	212	540

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station near Clarkston, Washington
Operated by U.S. Geological Survey

STATE Washington

MAJOR BASIN Pacific Northwest

MINOR BASIN Middle and Lower Snake River

STATION LOCATION Snake River at Wawawai, Washington

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	21.200	23.500	25.900	27.700	42.300	44.900	51.500	59.900	141.000	37.100	19.700	17.600
2	18.700	26.100	25.300	27.500	40.800	49.000	52.200	72.200	148.000	33.000	18.500	20.000
3	17.600	26.300	25.300	26.600	37.600	45.300	58.000	79.000	160.000	30.200	18.100	23.000
4	18.100	25.400	26.700	25.300	33.500	39.500	77.400	75.800	156.000	29.000	16.000	21.600
5	19.500	24.200	26.800	24.600	31.500	37.400	74.000	73.500	150.000	28.500	16.600	20.600
6	20.200	24.000	26.200	27.000	32.100	36.100	66.700	68.700	145.000	28.200	17.300	21.200
7	20.900	25.200	23.600	28.400	38.000	35.100	60.600	62.400	148.000	29.300	14.600	19.700
8	21.500	25.600	22.200	28.200	39.900	34.900	58.200	58.400	140.000	28.000	13.900	18.800
9	23.000	24.800	21.500	28.100	40.000	35.800	56.000	55.900	127.000	25.400	16.000	17.300
10	20.800	24.500	22.300	28.900	51.500	36.300	51.400	58.000	122.000	23.100	17.600	17.400
11	21.100	22.900	22.800	29.700	75.600	35.200	49.300	67.200	115.000	24.000	14.000	17.300
12	23.100	25.500	21.700	29.000	72.200	32.900	47.400	70.300	112.000	23.000	16.400	17.100
13	25.500	26.400	24.000	27.800	60.000	30.100	51.600	70.100	112.000	21.900	17.600	17.800
14	24.600	27.000	25.400	27.800	55.300	36.300	50.400	68.500	103.000	21.000	14.800	17.700
15	23.300	27.500	25.700	27.500	49.700	44.500	46.600	69.400	91.800	20.500	14.000	18.500
16	22.000	27.600	25.400	28.000	50.400	46.000	43.700	71.900	88.600	20.000	16.200	17.900
17	23.400	28.000	24.700	30.900	48.300	53.600	44.400	74.600	86.300	19.000	17.200	17.400
18	23.400	29.200	26.000	31.100	45.400	50.600	58.200	79.700	83.800	18.400	14.800	17.200
19	23.800	33.200	29.600	28.500	41.800	46.200	61.000	83.300	76.500	18.200	16.700	18.300
20	24.400	29.800	31.800	26.100	41.700	46.600	57.000	91.500	73.100	17.500	17.200	20.500
21	24.700	26.900	29.700	23.900	47.700	47.600	53.300	102.000	66.600	17.000	14.200	21.500
22	24.000	27.600	27.400	23.000	66.600	46.600	48.100	111.000	64.700	17.500	13.800	22.100
23	23.600	26.100	26.500	23.800	64.300	48.000	51.600	116.000	59.700	19.100	16.300	21.800
24	22.900	25.200	26.200	25.500	54.600	53.400	51.500	129.000	55.900	17.300	17.000	22.000
25	24.800	31.000	25.300	27.600	50.200	59.000	50.100	141.000	54.800	15.800	14.000	22.700
26	22.600	32.100	25.000	29.000	47.800	56.900	47.600	156.000	46.800	17.300	15.800	22.200
27	23.000	31.600	24.300	27.200	43.000	55.300	45.500	168.000	46.900	18.900	17.600	22.800
28	22.800	31.800	26.300	27.300	44.000	53.500	45.800	154.000	46.100	16.000	15.700	21.500
29	22.600	29.100	27.600	27.100		50.700	48.400	138.000	40.400	16.100	15.800	20.900
30	22.800	26.600	27.600	29.000		49.600	52.800	140.000	37.100	20.000	17.000	19.600
31	24.000		27.900	32.100		49.500		151.000		22.000	16.900	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE IDAHO

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN CENTRAL SNAKE RIVER

STATION LOCATION SNAKE RIVER AT WEISER, IDAHO

50

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	24	60*	11	15	0	7	7	5	20	25									
11	14	60*	12	22	0	5	5	0	0	0									
12	5	60	1	27	0	6	6	0	0	0									
1	16	61*	3	3	0	4	4	1	12	13									
4	17	61	5	17	0	6	6	0	0	0									
8	30	61	9	22	0	3	3	1	8	9									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE IDAHO

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN CENTRAL SNAKE RIVER

STATION LOCATION SNAKE RIVER AT WEISER, IDAHO

50

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFIERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	10	60	2600					70	50	1960	530	600	820	92	20	83	20	47	10	46	10	40	70		2				7-9-7
10	17	60	700			20	20	90	70	460	80	460	950	92	20	82	10	36	10	46	10	60	150		20		2		--9--
11	14	60	1800			50		20	90	570	1100	240	700	36	10	92	10	80	10	65	10	60	40	10	13	1		1	7-943
12	5	60	4200	70	70	90	50	510	180	1650	1630	1690	1210	36	20	92	20	65	10	82	10	50	150		3		5		71943
1	9	61	1400					20		310	1050	1160	1050	36	30	82	10	65	10	66	10	30			1				--943
1	16	61	3000					70		860	2100	1070	1010	65	20	36	20	82	20	71	10	40	50	20			9		3-743
4	17	61	18900	150	20	250		310		14010	4180	4220	2840	82	20	80	10	47	10	9	10	50		10	55	6			7-973
6	13	61	3900		20	190		100		730	2840	230	1860	47	80	92	10	35	*	65	*	10			106	2	3		7-743
7	18	61	12900	60		1350		620	20	6250	4640	1260	2570	92	70	26	10	58	*	80	*	20			11				41-77
8	30	61	11100	120		5280		1220	40	1590	2840	700	870	26	40	92	30	46	*	6	*	30		20	26		1		74338

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE IDAHO

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN CENTRAL SNAKE RIVER

STATION LOCATION SNAKE RIVER AT WEISER, IDAHO

50

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	3	60	17.1	9.5	7.4	3.1	11	-	-	.3	6	216	248	5	40	-	-	-	-
10	10	60	12.5	9.1	7.6	3.7	27	-	-	.3	5	104	236	5	21	-	-	-	-
10	17	60	13.5	9.3	8.0	3.3	21	-	-	.3	6	194	264	5	15	-	-	-	-
10	24	60	13.0	8.9	7.6	2.5	25	-	-	.3	6	204	240	5	12	-	-	-	-
10	31	60	10.4	10.2	7.4	3.5	17	-	-	.3	7	220	244	5	20	-	-	-	-
11	7	60	9.1	10.6	7.6	3.5	25	-	-	.3	8	198	220	5	18	-	-	-	-
11	14	60	8.9	9.4	7.6	3.2	21	-	-	.3	6	216	216	5	18	-	-	-	-
1	9	61	4.2	9.9	7.4	3.2	-	2.4	4.1	.3	6	192	204	5	16	-	-	-	-
6	13	61	20.0	-	7.6	-	-	-	-	-	-	150	240	5	24	-	-	-	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Weiser, Idaho
Operated by U.S. Geological Survey

STATE Idaho

MAJOR BASIN Pacific Northwest

MINOR BASIN Central Snake River

STATION LOCATION Snake River at Weiser, Idaho

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	13.500	13.200	14.700	12.700	19.400	12.600	13.600	11.100	14.600	8.000	8.310	9.460
2	13.500	12.900	14.500	12.900	15.400	12.200	13.100	11.200	14.800	8.000	8.230	9.630
3	13.000	13.500	12.400	12.400	16.900	12.400	13.300	11.800	15.200	8.230	8.230	9.980
4	12.400	13.500	12.300	11.900	14.800	11.300	14.700	11.300	14.700	8.300	8.310	9.930
5	12.800	13.400	12.100	10.800	13.400	11.500	15.100	11.200	14.200	8.380	8.310	10.100
6	13.000	13.200	12.800	10.500	14.300	11.400	14.800	11.500	13.800	8.880	8.470	9.800
7	13.600	11.500	13.300	10.900	13.800	11.200	14.000	11.300	13.600	8.800	8.470	9.720
8	14.600	11.600	13.500	11.300	14.000	11.600	13.400	11.000	13.500	8.550	8.470	9.630
9	14.300	13.500	12.800	11.400	14.200	11.400	13.100	10.600	13.200	8.230	8.310	9.630
10	13.100	13.800	12.900	11.600	16.600	12.000	13.000	9.900	13.000	8.470	8.310	9.890
11	13.500	13.900	12.200	12.700	17.100	11.500	11.400	10.900	12.600	8.310	8.310	10.200
12	14.900	14.400	13.300	12.000	16.200	11.800	12.200	11.300	12.700	8.470	8.310	10.200
13	14.600	14.900	12.600	11.800	15.200	13.300	12.600	11.100	12.100	8.200	8.880	10.200
14	15.600	14.900	11.800	11.600	14.300	13.700	11.600	11.100	11.200	8.010	9.120	10.700
15	15.900	14.700	13.100	12.200	15.400	14.100	11.400	11.500	11.000	7.770	9.210	10.300
16	16.400	14.200	12.900	12.100	15.200	13.900	11.100	11.700	10.200	7.770	8.960	10.500
17	14.900	14.200	13.000	10.800	14.000	13.700	11.200	11.300	9.600	7.880	8.710	10.300
18	13.500	16.800	13.500	11.600	14.000	13.300	11.200	11.400	9.450	7.700	8.630	11.000
19	14.000	16.400	13.800	11.800	13.200	13.600	12.300	11.600	7.950	7.830	8.630	12.100
20	14.200	15.100	13.300	11.000	13.100	14.400	12.000	11.900	7.470	7.970	8.630	12.000
21	13.700	12.100	13.000	11.700	12.600	13.200	11.100	12.300	8.000	7.900	8.550	12.200
22	14.000	11.900	13.000	11.300	13.300	12.800	10.700	13.100	7.780	8.000	8.630	12.600
23	14.000	14.200	12.700	11.400	13.300	12.900	10.600	12.900	8.080	8.360	8.630	11.700
24	13.800	15.200	13.400	11.200	13.100	16.600	10.200	13.300	8.220	8.140	8.630	11.300
25	12.600	16.200	14.000	12.400	12.700	16.000	9.900	13.600	7.920	8.180	8.710	11.200
26	13.200	14.600	13.100	11.600	12.000	15.700	9.800	14.200	8.220	8.000	9.900	11.000
27	13.000	15.200	12.000	11.700	11.400	15.500	9.500	14.700	7.850	8.140	9.460	11.000
28	13.200	13.600	12.200	11.400	11.300	14.900	9.500	14.500	7.850	8.320	9.540	11.100
29	13.100	12.700	12.300	10.700		13.500	9.500	13.900	7.850	8.910	9.380	10.700
30	14.000	13.900	12.600	10.800		12.900	10.900	14.500	7.780	8.330	9.290	10.700
31	11.400		12.600	11.900		13.800		14.900		8.320	9.460	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE COLORADO

MAJOR BASIN MISSOURI RIVER

MINOR BASIN SOUTH PLATTE RIVER

STATION LOCATION SOUTH PLATTE RIVER AT JULESBURG, COLORADO

92

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
6	12	61	7	18	0	18	18	0	25	25							
6	19	61	7	20	2	20	22	0	21	21							
6	26	61	7	27	2	30	32	0	39	39							
7	3	61	8	2	0	23	23	0	29	29							
7	10	61	8	10	0	21	21	0	22	22							
7	17	61	8	8	0	27	27	0	23	23							
7	25	61	8	14	0	43	43	0	57	57							
7	31	61	8	31	23	11	34	58	21	79							
8	7	61	10	3	19	44	63	91	77	168							
8	14	61	9	13	1	25	26	16	28	44							
8	24	61	9	25	0	33	33	20	57	77							
8	28	61	9	25	0	28	28	0	116	116							
9	5	61	10	20	1	15	16	4	54	58							
9	11	61	10	24	0	42	42	0	87	87							
9	18	61	10	23	5	39	44	21	66	87							
9	26	61	10	7	2	44	46	1	74	75							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE COLORADO

MAJOR BASIN MISSOURI RIVER

MINOR BASIN SOUTH PLATTE RIVER

STATION LOCATION SOUTH PLATTE RIVER AT JULESBURG, COLORADO

92

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFIERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
6	12	61	3600		40	890		210		1120	1370	20	500	92	10	71	10	46	10	65	10	60	20		2	2			4876-
8	24	61	14700		120	310		120		1260	12900	60	810	85	30	92	10	65	10	66	10	40				2			74763
9	18	61	3800			310		70		110	3350	200	3530	92	10	85	10	11	10	12	10	60	50						78763

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE COLORADO
MAJOR BASIN MISSOURI RIVER
MINOR BASIN SOUTH PLATTE RIVER
STATION LOCATION SOUTH PLATTE RIVER AT JULESBURG, COLORADO

92

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
9	27	61	10	16	4000	208	37	171	0	8	15	2	1	11	1	5	2	1	6

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Julesburg, Colorado
Supplied by State of Colorado Department of Water Resources

STATE Colorado

MAJOR BASIN Missouri River

MINOR BASIN South Platte River

STATION LOCATION South Platte River at Julesburg, Colorado

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	.022	.106	.072	.206	.287	.141	.231	.107	2.310	.243	.241	.034
2	.023	.104	.096	.208	.218	.133	.257	.101	1.980	.292	.212	.036
3	.024	.099	.124	.165	.188	.155	.259	.099	2.070	.218	.181	.035
4	.024	.098	.150	.172	.211	.139	.260	.102	2.460	.168	.174	.034
5	.029	.101	.149	.174	.245	.137	.271	.093	2.680	.134	.169	.033
6	.032	.098	.172	.182	.225	.160	.284	.092	2.570	.117	.182	.035
7	.033	.099	.186	.224	.234	.215	.199	.087	3.020	.109	.192	.044
8	.034	.098	.192	.246	.250	.220	.199	.075	3.990	.124	.146	.089
9	.041	.095	.212	.265	.280	.237	.157	.070	5.470	.235	.101	.120
10	.043	.102	.213	.283	.273	.253	.193	.069	6.750	.218	.075	.126
11	.042	.102	.220	.286	.268	.258	.297	.062	5.930	.179	.061	.137
12	.041	.100	.233	.278	.270	.272	.322	.058	5.120	.169	.055	.145
13	.050	.097	.236	.270	.262	.278	.360	.060	5.050	.149	.064	.139
14	.063	.096	.243	.270	.246	.283	.358	.106	5.080	.129	.046	.120
15	.081	.096	.256	.274	.246	.286	.324	.181	5.440	.115	.045	.134
16	.083	.094	.249	.269	.250	.278	.318	.150	5.330	.097	.045	.135
17	.084	.095	.252	.264	.250	.283	.316	.150	4.880	.085	.050	.129
18	.086	.094	.257	.246	.243	.289	.306	.162	4.190	.073	.046	.116
19	.086	.099	.253	.235	.234	.279	.264	.204	3.540	.067	.044	.131
20	.096	.096	.239	.221	.232	.285	.251	.204	3.110	.064	.043	.159
21	.127	.100	.239	.230	.231	.276	.304	.268	2.410	.066	.043	.156
22	.122	.101	.167	.245	.231	.277	.397	.740	1.810	.064	.040	.165
23	.110	.097	.167	.248	.231	.277	.397	1.010	1.440	.057	.037	.195
24	.104	.099	.228	.234	.231	.272	.334	1.250	1.120	.052	.038	.236
25	.099	.097	.288	.240	.230	.269	.290	1.610	.800	.052	.037	.285
26	.103	.095	.269	.223	.196	.242	.278	2.040	.630	.062	.036	.352
27	.100	.095	.252	.188	.165	.186	.225	2.420	.458	.104	.034	.407
28	.102	.066	.238	.201	.157	.166	.146	2.620	.299	.121	.034	.585
29	.102	.052	.178	.194		.153	.120	2.400	.203	.131	.033	.797
30	.099	.060	.167	.270		.144	.106	2.500	.165	.151	.033	.866
31	.105		.188	.333		.158		2.540		.253	.036	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE MARYLAND

MAJOR BASIN NORTH ATLANTIC

MINOR BASIN SUSQUEHANNA-JUNIATA

STATION LOCATION SUSQUEHANNA RIVER AT

CONOWINGO, MARYLAND 75

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	5	60	10	19	0	1	1	0	0	0							
10	13	60	10	31	0	1	1	0	1	1							
10	19	60	10	31	0	2	2	0	1	1							
10	26	60	11	18	1	1	2	0	0	0							
11	2	60	11	29	0	2	2	0	0	0							
11	9	60	11	28	0	1	1	0	0	0							
11	16	60	11	29	0	0	0	0	0	0							
11	23	60	12	2	0	1	1	0	0	0							
11	30	60	12	15	0	1	1	0	0	0							
12	7	60	12	30	0	0	0	0	0	0							
12	28	60	1	11	0	2	2	0	5	5							
1	4	61	1	27	0	1	1	0	0	0							
1	11	61	1	31	0	1	1	0	0	0							
1	18	61	2	6	0	1	1	0	0	0							
1	25	61	2	15	0	0	0	0	0	0							
2	1	61	2	17	0	0	0	0	1	1							
2	10	61	3	3	0	0	0	0	0	0							
2	15	61	3	2	0	0	0	0	0	0							
2	23	61	3	22	1	1	2	0	0	0							
3	1	61	3	20	5	0	5	0	0	0							
3	8	61	3	27	1	0	1	0	0	0							
3	15	61	3	31	1	0	1	0	0	0							
3	29	61	4	17	0	0	0	0	0	0							
4	5	61	4	20	0	0	0	0	0	0							
4	12	61	4	24	0	0	0	0	0	0							
4	19	61	5	10	0	0	0	1	3	4							
4	26	61	5	17	0	0	0	0	3	3							
5	31	61*	6	12	0	0	0	0	1	1							
6	28	61*	7	17	0	1	1	0	3	3							
8	6	61*	8	29	0	0	0	0	16	16							
9	20	61	10	7	-	-	-	1	9	10							
9	27	61	10	11	-	-	-	0	0	0							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE MARYLAND
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN SUSQUEHANNA-JUNIATA
STATION LOCATION SUSQUEHANNA RIVER AT CONOWINGO, MARYLAND

DATE OF SAMPLE			ALGAE (Number per ml.)								INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	18	60	200			90		20	70	50		40	70	26	10	56	10	27	10	82	10	50	70		10				------
11	2	60	300					20	160	130	90	110	110	56	40	82	20	61	10	58	10	30		20	42	4		1	------
12	7	60	200		20	20		40	70	20		20		82	20	9	10	27	10	70	10	50			1				------
1	18	61	100								50			92	30	35	10	64	10	45	*	50							------
1	25	61	100								70		50																------
2	1	61	300					20	20		220			35	20	92	20	2	10	65	10	50			2				------
2	15	61	200							70	130	40	470	92	20	82	10	35	10	70	10	50							------
3	8	61	100								110		270	2	10	92	10	64	10	93	10	70					2		------
3	15	61	200					40		20	160	50	220	92	10	2	10	64	10	62	*	80			2		1		------
4	5	61	700					40	20	160	440	20	240	93	10	51	10	31	10	62	10	60	20						------
4	26	61	400							20	360	90	340	92	10	2	10	93	10	31	10	70	50		1				------
5	10	61	3300			170		1470	20	1240	410	170	230	92	20	82	20	47	10	93	10	50			13	1			-1933
5	24	61	4300	20		220		250		1090	2750	420	540	27	30	82	10	9	10	92	10	40			73				34973
6	7	61	1300			70		20	20		1130	20	490	9	30	82	30	47	10	95	10	30			88	3			3----
6	21	61	2000			850		190		560	440	410	540	82	40	9	10	27	10	83	10	40	20		209	7	1		-89--
7	12	61	1000			190				410	390	100	440	56	20	26	20	47	10	82	10	50			11	4			4----
8	2	61	600			350		40	20	20	170	40	40	56	20	82	10	27	10	26	10	60			220	39			------
8	6	61	3400	20		810		230		1450	910	580	290	27	10	82	10	92	10	62	10	60		20	70	7			48973
8	16	61	1900			500				1120	290	730	520	56	70	47	10	62	*	93	*	20			9	8	2		489-7
8	30	61	1100			210		100		460	310	80	60	26	30	56	10	27	10	82	10	40			68	18		1	----7
9	6	61	300			60		40			190	60	80	56	10	47	10	27	10	82	10	60	40	10	19	5	2		------
9	13	61	200			60		20		120	40	40	40	47	30	26	10	56	10	27	10	40		20	108	11			------
9	27	61	1200		60	20		60		1010	20	210	60	26	60	58	20	82	10	27	*	10	80		112	6		1	4----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE MARYLAND
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN SUSQUEHANNA-JUNIATA
STATION LOCATION SUSQUEHANNA RIVER AT CONOWINGO, MARYLAND

75

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	11	60	10	18	5000	213	74	139	4	19	19	2	2	15	0	7	4	1	20
11	2	60	11	10	5000	189	68	121	3	15	21	1	1	18	1	7	5	2	15
12	7	60	12	14	5210	137	50	87	2	10	19	2	1	15	1	5	2	1	11
1	31	61	2	7	5240	149	58	91	5	12	20	1	2	16	1	6	5	0	10
3	7	61	3	14	5050	171	51	120	4	12	12	2	1	8	1	5	3	1	14
4	12	61	4	20	5530	133	36	97	1	8	13	2	2	9	0	4	2	1	7
5	22	61	6	7	2630	330	145	185	13	38	26	4	3	19	0	13	17	1	37
6	26	61	7	12	2210	437	129	308	14	34	27	4	2	20	1	16	14	1	23
8	9	61	8	23	4030	302	98	204	5	26	23	3	2	17	1	11	11	1	21
9	20	61	10	10	5974	161	63	98	2	13	23	3	2	15	3	9	6	1	9

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MARYLAND

MAJOR BASIN NORTH ATLANTIC

MINOR BASIN SUSQUEHANNA-JUNIATA

STATION LOCATION SUSQUEHANNA RIVER AT CONOWINGO, MARYLAND

75

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	4	60	18.9	6.6	7.3	1.1	5	1.9	3.8	.0	6	29	79	10	5	54	-	124	-
10	5	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*170
10	19	60	17.8	7.2	7.3	.6	9	.9	2.0	.1	7	33	105	7	4	73	-	172	-
10	26	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	330
10	27	60	18.3	7.6	7.3	-	9	1.3	2.7	.0	7	35	108	7	5	76	.1	175	-
11	9	60	16.7	9.1	7.3	1.1	7	1.9	3.2	-	10	42	144	8	11	89	.1	231	500
11	16	60	15.0	9.7	7.3	1.0	3	1.9	2.4	-	11	44	128	8	5	80	.0	210	170
11	23	60	13.3	9.9	7.5	1.9	10	-	-	-	9	43	118	12	2	77	-	202	500
11	30	60	12.2	9.9	7.5	.8	8	1.8	2.7	-	10	41	116	10	4	77	.0	182	250
12	7	60	10.6	10.3	7.3	.8	10	1.7	2.9	-	10	41	119	8	3	81	.0	189	340
12	28	60	2.2	12.6	7.3	-	3	2.2	4.6	.1	10	46	117	8	6	74	.0	184	*110
1	4	61	5.0	12.5	7.3	.7	-	1.9	3.9	-	11	51	132	7	4	84	-	211	*110
1	11	61	3.9	12.6	7.1	.7	4	.7	5.0	-	11	47	137	4	4	94	.1	231	920
1	18	61	1.7	11.9	7.1	.8	13	.5	4.4	-	12	51	131	9	4	80	.1	202	170
1	25	61	1.1	12.1	7.3	.5	7	.3	4.8	-	10	48	124	7	2	82	.1	197	170
2	1	61	1.1	12.1	7.1	.7	7	.4	4.9	-	12	46	120	12	9	71	.1	185	370
2	10	61	1.1	11.4	7.1	.5	12	-	-	-	11	48	121	7	3	73	.1	200	230
2	15	61	1.1	11.2	7.0	1.6	7	.6	6.4	-	12	49	124	15	4	-	.0	-	500
2	23	61	1.1	13.3	7.2	2.3	17	.7	7.6	-	7	36	78	-	108	38	.0	130	-
3	1	61	4.4	12.6	6.9	1.6	27	.5	5.8	-	2	14	36	11	240	23	.2	94	5500
3	8	61	6.7	11.8	7.2	1.3	8	1.6	3.6	-	4	23	54	7	16	30	.1	87	7300
3	15	61	4.4	12.0	7.1	.7	9	1.3	2.6	-	4	23	54	7	15	30	.0	85	1200
3	29	61	7.2	11.2	7.3	.7	12	1.9	2.5	-	7	39	68	10	13	37	.2	109	900
4	5	61	5.6	11.6	7.3	.6	5	1.7	2.9	-	4	23	52	7	12	27	.1	92	500
4	11	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1100
4	12	61	7.2	11.3	7.3	.6	-	1.2	3.0	-	5	30	69	7	10	39	.1	110	-
4	19	61	7.8	11.4	7.1	1.0	-	-	-	.0	5	19	42	13	85	24	-	81	7800
4	26	61	13.3	9.4	7.3	.6	-	-	-	-	-	24	57	8	15	-	-	-	2800
5	3	61	11.1	10.1	7.1	.6	-	-	-	-	-	24	54	10	30	-	-	-	1300
5	10	61	15.0	10.5	7.5	-	-	-	-	-	5	30	66	7	10	-	-	-	500
5	17	61	17.2	9.0	7.2	.7	-	-	-	-	5	29	59	10	13	-	-	-	670
5	24	61	16.7	9.9	7.5	-	-	1.3	2.9	-	6	30	66	7	4	-	-	113	-
5	29	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
5	31	61	16.1	9.5	7.4	-	-	-	-	-	6	31	75	6	6	-	-	-	-
6	2	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*120
6	7	61	18.9	7.9	7.3	1.1	-	-	-	-	6	37	83	6	3	-	-	-	*170
6	14	61	20.6	7.1	7.3	3.4	-	-	-	-	8	44	98	6	6	-	-	-	120
6	21	61	22.8	6.8	7.3	1.5	-	-	-	-	9	41	83	8	10	-	-	-	*170
6	28	61	23.5	6.5	7.2	3.8	18	-	-	-	-	40	83	-	32	-	-	-	*2

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MARYLAND

MAJOR BASIN NORTH ATLANTIC

MINOR BASIN SUSQUEHANNA-JUNIATA

STATION LOCATION SUSQUEHANNA RIVER AT CONOWINGO, MARYLAND

75

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	5	61	24.0	5.0	7.2	1.9	18	.9	6.2	.1	6	47	87	10	1	56	.1	130	1
7	12	61	23.9	4.8	7.3	2.0	11	1.1	6.0	.1	6	42	86	7	4	50	.0	148	*100
7	19	61	24.5	4.3	7.3	1.8	9	1.0	4.8	.2	6	46	102	7	52	60	.0	163	30
7	26	61	27.2	3.3	7.1	2.8	6	.7	5.3	.2	8	52	117	9	4	66	.0	173	*10
8	2	61	27.8	3.1	7.3	2.7	18	.5	6.5	.2	8	49	122	8	48	65	.0	184	*100
8	9	61	26.1	5.0	7.1	4.4	-	2.6	4.7	.1	7	43	104	9	10	65	.0	157	*2
8	16	61	25.6	5.0	7.2	1.9	-	-	-	-	11	48	108	12	12	70	-	171	*2
8	23	61	23.3	3.7	7.1	3.0	-	-	-	-	10	47	108	10	6	-	-	165	*2
8	30	61	-	5.5	7.2	2.1	-	-	-	-	-	47	119	-	6	-	-	-	7
9	6	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*2
9	27	61	23.9	5.4	7.1	3.4	-	-	-	-	11	44	112	7	35	49	-	187	*2

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Marietta, Pennsylvania
Operated by U.S. Geological Survey

STATE Maryland

MAJOR BASIN North Atlantic

MINOR BASIN Susquehanna-Juniata

STATION LOCATION Susquehanna River at Conowingo, Maryland

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	13.400	11.400	10.100	9.000	9.000	250.000	93.800	92.000	23.900	18.000	13.700	17.300
2	13.700	14.000	12.600	10.500	8.000	182.000	86.500	81.300	23.100	16.600	12.300	15.000
3	14.400	13.700	12.300	12.500	8.000	139.000	76.200	72.900	21.600	15.000	13.100	13.700
4	13.400	13.700	11.400	11.500	7.000	111.000	69.600	64.900	20.100	13.700	15.600	13.100
5	12.300	13.700	10.900	11.000	7.200	97.600	63.300	58.800	19.400	12.800	19.400	12.300
6	11.400	13.100	10.600	10.500	7.800	101.000	57.300	51.500	20.100	12.300	17.300	10.100
7	10.900	12.800	10.600	9.500	7.500	132.000	51.500	48.700	20.100	12.600	21.600	9.610
8	10.400	13.100	10.400	9.100	7.800	153.000	48.700	46.100	18.700	12.600	18.700	9.360
9	10.600	12.600	10.100	8.800	7.800	162.000	46.100	48.700	18.000	12.300	15.000	9.610
10	10.400	12.300	8.860	12.000	8.100	144.000	51.500	60.300	18.000	11.700	12.800	8.860
11	9.610	12.000	9.110	10.500	8.800	122.000	60.300	76.200	18.000	10.400	11.700	8.620
12	9.360	12.000	5.500	11.000	8.600	101.000	68.000	90.200	29.700	10.100	11.200	8.620
13	8.860	12.000	3.300	11.000	8.900	84.800	90.200	83.000	39.800	11.200	10.400	8.380
14	8.620	11.700	4.000	11.000	9.100	76.200	137.000	72.900	38.600	12.800	9.360	8.140
15	8.380	11.400	5.400	11.000	9.500	76.200	148.000	63.300	34.000	12.300	8.860	7.670
16	8.140	11.700	6.600	12.000	11.000	72.900	160.000	55.800	29.900	12.800	8.140	6.980
17	7.900	11.700	7.800	13.500	12.500	72.900	197.000	54.300	29.900	13.100	8.380	6.540
18	7.210	11.200	8.600	12.500	15.000	74.500	230.000	54.300	31.900	12.300	8.620	6.540
19	7.210	10.900	8.200	13.500	23.000	68.000	206.000	55.800	29.900	11.200	7.900	6.540
20	7.670	10.600	7.800	10.000	42.000	63.300	157.000	51.500	25.400	14.000	6.980	6.330
21	7.440	9.860	8.000	9.600	66.000	58.800	126.000	48.700	22.300	14.400	7.440	6.330
22	7.440	10.100	7.600	12.000	110.000	55.800	101.000	46.100	24.600	14.700	6.760	5.920
23	7.440	9.860	7.200	11.500	113.000	57.300	90.200	43.500	29.900	13.400	6.540	6.760
24	8.620	9.360	6.600	10.500	113.000	58.800	84.800	41.000	25.400	13.400	6.330	6.760
25	7.900	9.610	7.500	10.000	137.000	58.800	81.300	39.800	26.300	14.700	7.900	6.540
26	8.620	9.610	6.800	10.000	252.000	63.300	109.000	37.400	29.900	14.000	14.400	5.920
27	9.610	8.860	7.000	9.500	376.000	68.000	192.000	34.000	28.000	16.000	16.000	5.000
28	9.610	9.110	6.600	9.000	340.000	68.000	190.000	30.900	25.400	17.300	18.000	4.830
29	9.360	9.110	7.200	8.700		69.600	132.000	29.000	22.300	20.800	18.700	4.670
30	9.110	10.100	7.000	8.800		79.500	105.000	27.100	19.400	20.100	20.800	4.360
31	9.110		6.900	9.000		93.800		25.400		16.000	19.400	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE PENNSYLVANIA

MAJOR BASIN NORTH ATLANTIC

MINOR BASIN SUSQUEHANNA RIVER-NORTH BRANCH

STATION LOCATION SUSQUEHANNA RIVER AT SAYRE, PENNSYLVANIA

76

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	3	60	10	19	0	1	1	0	0	0							
10	10	60	10	24	0	0	0	0	0	0							
10	17	60	11	2	0	0	0	0	0	0							
10	24	60	11	14	0	2	2	0	0	0							
10	31	60	11	23	0	0	0	0	0	0							
11	7	60	11	25	0	0	0	0	0	0							
11	15	60	11	30	0	1	1	0	14	14							
11	21	60	12	2	0	1	1	0	0	0							
11	28	60	12	19	0	0	0	0	0	0							
12	5	60	12	29	0	0	0	0	1	1							
12	12	60	12	29	0	1	1	0	0	0							
12	20	60	1	13	1	1	2	0	0	0							
12	27	60	1	18	0	0	0	0	0	0							
1	3	61	1	24	0	0	0	0	0	0							
1	9	61	1	31	0	0	0	0	0	0							
1	16	61	2	2	0	1	1	0	0	0							
1	23	61	2	7	0	1	1	0	4	4							
1	30	61	2	16	0	0	0	6	1	7							
2	6	61	2	28	0	0	0	0	0	0							
2	14	61	3	2	0	0	0	0	0	0							
2	20	61	3	8	4	0	4	0	0	0							
3	6	61	3	27	0	1	1	8	0	8							
3	13	61	4	3	1	0	1	0	0	0							
3	27	61	4	17	0	0	0	0	5	5							
4	24	61*	5	8	1	0	1	0	0	0							
5	29	61*	6	13	1	0	1	0	0	0							
6	26	61*	7	11	0	0	0	0	0	0							
7	25	61*	8	29	0	0	0	0	0	0							
8	28	61	9	21	0	0	0	0	4	4							
9	18	61	10	9	-	-	-	6	2	8							
								10	2	12							

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE PENNSYLVANIA
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN SUSQUEHANNA RIVER-NORTH BRANCH
STATION LOCATION SUSQUEHANNA RIVER AT
SAYRE, PENNSYLVANIA 76

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
			TOTAL	BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR		COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFIERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
10	3	60	2200			350		90	20	1610	130	220	110	82	70	27	10	64	10	70	*	10	20		1				4-9--
10	17	60	8700			150		200	70	7810	440	460	400	82	60	26	20	64	10	92	*	*	150	10	2				4-9-3
11	7	60	300						20	20	290	50	290	92	60	36	10	64	10	65	*	20			3	1			---7-
12	5	60	300							40	220		70	36	40	64	20	31	*	82	*	30	40						------
1	3	61	300				20				250	90	250	36	30	82	10	26	10	64	10	50	70			2			------
2	6	61	400				20	70		20	270	20	50	36	30	93	20	51	10	31	10	40	20	10					------
3	6	61	100							20	110		290	16	10	31	10	64	10	2	10	70							------
3	24	61	200		90					20	110		90	36	20	2	10	51	10	93	10	70			4		2		------
4	17	61	700					20		130	540	20	630	51	20	63	20	93	10	31	10	60	20		1		1		------
5	15	61	1400					50		980	340	90	670	82	20	31	10	92	10	2	10	60					1		--9--
6	5	61	9800		20	80		660		6020	2980	20	620	92	40	31	20	82	20	36	10	20			10	1			74953
6	19	61	2000	20		220		110		850	780	180	1140	36	20	83	10	92	10	31	10	50			7		2		--94-
7	5	61	7800	360	130	4600		180		2170	400	960	450	82	50	27	10	26	10	64	*	30	20						54123
7	17	61	6700	50		3050		580	20	2500	540	1940	290	27	40	26	40	82	10	16	00	10	70	10	13	1	2		54135
8	22	61	2900	40	80	1600		190		540	480	250	210	82	30	27	20	16	10	32	*	30			4		2		48925
9	18	61	2500			850		460		870	310	330	230	27	40	26	10	82	10	23	10	30	40		30				4893-

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE PENNSYLVANIA
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN SUSQUEHANNA RIVER-NORTH BRANCH
STATION LOCATION SUSQUEHANNA RIVER AT
SAYRE, PENNSYLVANIA

76

DATE OF SAMPLE						EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY	GALLONS FILTERED	TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	3	60	10	23	3337	340	124	216	9	27	43	3	3	35	2	15	5	2	23
11	3	60	11	17	2977	251	63	188	2	16	20	2	2	15	1	8	4	1	12
12	5	60	12	20	3127	317	79	238	4	17	25	3	3	16	3	11	6	1	15
1	9	61	1	23	3299	283	85	198	4	18	27	2	2	21	2	13	7	2	14
2	20	61	3	17	2244	413	133	280	3	32	37	4	4	25	4	17	11	1	32
4	28	61	5	16	2281	230	78	152	2	20	23	5	3	14	1	11	5	2	15
6	2	61	6	16	1608	432	114	318	6	23	43	8	4	28	3	15	10	1	16
6	16	61	7	10	2900	215	69	146	5	15	24	5	3	16	0	7	5	1	12
7	22	61	8	2	2565	313	99	214	6	23	29	4	2	21	2	11	9	1	20
8	28	61	9	18	4268	196	50	146	1	10	24	4	3	16	1	6	2	0	7
9	25	61	10	19	4455	174	47	127	2	10	18	2	1	15	0	6	4	1	6

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE PENNSYLVANIA
MAJOR BASIN NORTH ATLANTIC
MINOR BASIN SUSQUEHANNA RIVER-NORTH BRANCH
STATION LOCATION SUSQUEHANNA RIVER AT
SAYRE, PENNSYLVANIA

76

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
10	10	60	-	-	7.7	-	-	-	-	-	10	74	104	5	5	18	.0	104	-
10	24	60	-	-	7.6	-	-	-	-	-	10	62	80	5	5	17	.2	102	-
10	31	60	-	-	7.8	-	-	-	-	-	6	98	80	5	5	17	.2	94	-
11	7	60	-	-	7.7	-	-	-	-	-	7	52	92	5	5	15	.2	67	-
11	15	60	-	-	8.0	-	-	-	-	-	12	58	96	5	5	25	.0	108	-
11	21	60	-	-	7.9	-	-	-	-	-	11	64	96	10	5	24	.1	95	-
11	28	60	-	-	7.9	-	-	-	-	-	11	66	100	10	5	20	.0	-	-
12	20	60	-	-	7.5	-	-	-	-	-	8	78	76	0	0	23	.2	-	-
12	27	60	-	-	7.5	-	-	-	-	-	12	72	106	0	20	26	.3	133	-
1	3	61	-	-	7.8	-	-	-	-	-	13	72	100	5	20	24	.4	134	-
1	9	61	-	-	-	-	-	-	-	-	12	-	-	-	0	22	.5	124	-
1	16	61	-	-	-	-	-	-	-	-	7	-	-	0	-	21	.5	99	*50
1	23	61	-	-	-	-	-	-	-	-	13	-	-	-	0	34	.4	156	*50
1	30	61	1.0	-	7.2	-	-	-	-	-	-	87	94	5	3	-	-	-	*50
2	6	61	-	-	-	-	-	-	-	-	16	80	-	-	0	36	.6	158	-
2	15	61	-	-	-	-	-	-	-	-	22	-	-	-	-	26	.8	155	-
2	20	61	3.0	-	7.4	-	-	-	-	-	9	38	64	10	270	22	.2	81	-
3	6	61	5.5	-	6.8	-	-	-	-	-	4	38	70	10	50	19	.6	83	-
3	13	61	-	-	-	-	-	-	-	-	7	42	60	5	40	19	.1	98	-
3	27	61	4.7	-	7.4	-	-	-	-	-	-	37	64	0	20	-	-	-	-
4	3	61	4.5	-	7.4	-	-	-	-	-	5	34	48	10	25	20	.0	50	1100
4	10	61	5.2	-	7.5	-	-	-	-	-	-	44	108	0	10	-	-	-	*50
4	17	61	6.0	-	7.2	-	-	-	-	-	6	23	35	0	60	18	.1	45	150
4	24	61	10.0	-	7.3	-	-	-	-	-	11	36	48	5	45	40	.0	104	*50
5	1	61	9.0	-	7.5	-	-	-	-	-	6	35	46	0	40	12	.0	81	360
5	8	61	12.0	-	7.5	-	-	-	-	-	6	38	60	0	60	12	.1	53	-
5	15	61	16.5	-	7.3	-	-	-	-	-	6	49	56	10	40	11	.2	50	-
5	22	61	13.5	-	7.5	-	-	-	-	-	8	56	72	5	25	13	.2	58	6000
5	29	61	15.0	-	8.1	-	-	-	-	-	9	65	74	5	10	15	.0	76	11000
6	5	61	19.0	-	8.1	-	-	-	-	-	10	70	82	5	5	13	.0	98	50
6	13	61	22.5	-	7.3	-	-	-	-	-	10	47	78	5	45	22	.0	77	900
6	19	61	19.0	-	7.5	-	-	-	-	-	7	60	80	5	25	12	.0	87	*50
6	26	61	19.5	-	7.7	-	-	-	-	-	-	65	84	5	20	-	-	-	1000
7	5	61	22.0	-	8.1	-	-	-	-	-	-	82	82	5	12	-	-	-	100
7	11	61	18.5	-	8.4	-	-	-	-	-	-	89	104	5	20	16	.0	122	7700
7	17	61	22.5	-	8.6	-	-	-	-	-	18	85	96	5	10	17	.0	135	50
7	25	61	25.0	-	9.2	-	-	-	-	-	13	100	92	5	10	15	.0	115	590

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE PENNSYLVANIA

MAJOR BASIN NORTH ATLANTIC

MINOR BASIN SUSQUEHANNA RIVER-NORTH BRANCH

STATION LOCATION SUSQUEHANNA RIVER AT

SAYRE, PENNSYLVANIA 76

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
8	15	61	21.0	-	8.6	-	-	-	-	-	14	91	92	5	15	17	.2	162	-
8	22	61	22.0	-	7.6	-	-	-	-	-	-	90	98	5	10	-	-	-	450
8	29	61	23.0	-	7.5	-	-	-	-	-	9	65	70	5	70	16	-	-	1100
9	18	61	19.5	-	7.7	-	-	-	-	-	-	90	112	0	10	-	-	-	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station near Waverly, New York
Operated by U.S. Geological Survey

STATE	Pennsylvania
MAJOR BASIN	North Atlantic
MINOR BASIN	Susquehanna River-North Branch
STATION LOCATION	Susquehanna River at Sayre, Pennsylvania

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	2.270	4.150	2.890	1.600	1.020	42.200	19.900	19.800	4.350	3.560	4.210	2.530
2	2.270	3.940	3.330	1.550	1.000	29.300	17.800	16.900	4.100	3.160	3.720	2.310
3	2.230	4.380	3.080	1.550	1.020	23.500	16.100	15.900	4.400	3.640	5.570	2.010
4	2.290	4.520	2.820	1.500	1.060	22.300	13.900	14.100	4.740	3.430	4.710	1.820
5	2.090	4.130	2.550	1.450	1.040	22.300	12.500	12.100	4.380	3.360	3.640	1.730
6	1.820	3.860	2.640	1.400	1.040	29.600	11.400	10.600	3.780	3.060	2.910	1.610
7	1.840	3.800	2.680	1.400	1.060	35.500	11.000	11.700	3.260	2.730	2.400	1.490
8	1.800	3.670	2.710	1.450	1.060	30.500	11.400	12.800	3.200	3.410	2.090	1.430
9	1.800	3.640	2.680	1.350	1.080	24.600	10.600	13.400	8.390	3.160	1.860	1.880
10	1.700	3.610	2.360	1.300	1.080	19.800	10.100	21.300	11.400	3.590	1.700	1.630
11	1.560	3.880	1.800	1.350	1.100	16.300	12.500	20.200	13.100	3.330	1.640	1.470
12	1.520	4.400	1.240	1.350	1.080	14.100	15.000	16.700	13.000	2.680	1.700	1.360
13	1.410	4.400	1.200	1.350	1.100	12.500	18.700	14.200	11.400	2.340	1.950	1.300
14	1.330	3.830	1.500	1.400	1.160	11.300	24.100	12.600	11.900	2.150	1.790	1.240
15	1.270	3.590	1.900	1.450	1.200	11.400	24.400	10.900	14.600	1.990	1.490	1.200
16	1.210	3.360	2.100	1.450	1.240	13.300	28.600	10.700	14.000	1.950	1.320	1.120
17	1.200	3.430	2.250	1.400	1.260	11.100	40.500	11.000	10.700	2.070	1.270	1.630
18	1.140	3.540	2.400	1.350	1.400	8.670	38.700	10.000	8.340	2.230	1.200	2.480
19	1.150	3.180	2.300	1.300	4.800	8.090	32.100	8.590	6.790	2.550	1.140	2.070
20	1.350	3.110	2.200	1.250	12.200	8.300	26.300	7.840	5.940	2.620	1.070	1.560
21	2.420	2.890	2.000	1.240	16.000	8.230	21.300	7.210	5.250	2.400	1.320	1.200
22	2.940	2.730	1.750	1.220	14.500	7.810	18.500	8.410	8.980	2.250	1.510	1.070
23	3.180	2.660	1.650	1.200	15.000	7.780	19.400	8.160	11.800	2.110	2.030	1.030
24	2.620	2.730	1.600	1.160	24.000	8.890	24.500	7.500	11.100	1.820	2.070	.988
25	2.400	2.730	1.550	1.140	45.200	10.400	64.200	6.790	8.890	2.150	1.660	1.000
26	2.590	2.710	1.600	1.160	82.000	10.100	54.700	6.020	7.040	2.480	4.390	1.010
27	3.410	2.590	1.650	1.180	76.100	11.600	35.800	5.960	6.110	2.960	6.850	.923
28	4.990	2.480	1.600	1.140	58.400	20.100	27.400	5.690	5.370	3.030	7.010	.871
29	5.110	2.440	1.500	1.100		32.200	25.200	5.370	4.520	2.710	5.900	.806
30	4.630	2.480	1.500	1.080		34.600	24.600	5.080	3.940	2.570	4.430	.768
31	4.430		1.550	1.060		26.700		4.660		5.370	3.330	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE ALABAMA

MAJOR BASIN TENNESSEE RIVER

MINOR BASIN TENN. RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION TENNESSEE RIVER AT BRIDGEPORT, ALABAMA 77

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	26	60	11	10	0	2	2	0	17	17								
11	23	60	12	1	0	0	0	0	21	21								
12	7	60	12	29	0	0	0	0	69	69								
12	21	60	1	12	0	1	1	0	69	69								
1	5	61	1	24	0	0	0	0	65	65								
1	18	61	2	17	0	0	0	0	70	70								
2	1	61	2	13	0	1	1	3	133	136								
2	15	61	3	3	0	0	0	5	90	95								
3	2	61	3	20	0	0	0	0	187	187								
3	15	61	3	30	2	0	2	1	47	48								
3	29	61	4	14	1	0	1	0	26	26								
4	12	61	4	28	0	0	0	0	31	31								
5	10	61	5	31	0	0	0	50	80	130								
5	24	61	6	14	0	0	0	2	55	57								
6	7	61	6	20	0	0	0	0	55	55								
6	21	61	7	14	0	0	0	0	58	58								
7	5	61	8	4	0	0	0	4	46	50								
7	19	61	8	10	0	0	0	0	0	0								
8	2	61	9	7	0	1	1	8	46	54								
8	16	61	9	22	0	1	1	0	31	31								
8	31	61	9	27	0	0	0	0	38	38								
9	13	61	10	2	0	0	0	0	58	58								
9	27	61	10	11	0	2	2	3	25	28								

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE ALABAMA

MAJOR BASIN TENNESSEE RIVER

MINOR BASIN TENN. RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION TENNESSEE RIVER AT BRIDGEPORT, ALABAMA

77

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)										MICROINVERTEBRATES					
			TOTAL	BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR		COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE	OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	PROTOZOA (No. per ml.)	ROTIFIERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	DOMINANT GENERA (See Introduction for Identification)
10	26	60						20				20		70	10	57	10	10	10	16	10	60	150	10	1				------
11	9	60	100			20				20	50		20	82	10	10	10	70	10	16	10	60	90						------
11	21	60	100							90	50	20		57	30	56	10	10	10	82	10	40							------
12	7	60											50	57	40	56	20	82	10	44	10	30			1				------
12	21	60	300					20	20	160	90	50	70	56	20	82	20	57	10	80	10	40			5				------
1	5	61	400							310	90	50	130	82	20	80	10	62	10	56	10	60		10					--9--
1	18	61	600					20	20	470	90	160	20	82	40	57	30	56	10	97	10	20	20	10	6	2			--9-7
2	1	61	600					40	20	560	20	90	50	82	50	57	20	56	*	92	*	20		10	22	2			--9--
2	15	61	1700					40		1610	70	200	20	82	50	57	10	92	10	56	*	30	20	40	22				--9--
3	2	61	200					50		90	90	110	110	57	10	62	10	82	10	92	10	60		30	2				------
3	15	61	100					20		90	20	50	160	56	20	82	10	47	10	2	*	60		30					------
3	29	61											70	56	20	62	10	92	10	57	10	60	20		3				------
4	12	61	200					20		160	70	20	20	56	20	82	10	62	10	57	10	50				4			------
4	25	61	100			20		40		20				56	40	57	10	62	10	97	*	40							------
5	10	61	100							80	60	40	80	62	10	56	10	58	10	92	10	70	20		1				------
6	7	61	200					40		150	40	20	20	58	20	59	20	56	10	2	10	50			13	4	1		------
6	21	61												62	10	58	10	56	10	2	*	80		10	3	1			------
7	5	61	100			40				80				56	50	58	10	62	*	82	*	30	20		3	2			------
7	17	61	200			20		40		100	20		20	56	60	58	10	80	10	47	10	30				2			------
8	2	61	200			60		40		100	40			56	60	58	10	62	10	47	10	20			7				------
8	16	61	100			20				40	40	20	20	56	30	58	10	92	10	82	*	60	60		4				------
8	31	61	500			250		60		40	100	20		10	10	56	10	62	10	16	10	70			7	1		1	---2-
9	13	61	100			20					40			56	20	62	10	82	10	58	10	60			13	1			------
9	21	61	100			20		40		60	20		20										390		4				------

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE ALABAMA

MAJOR BASIN TENNESSEE RIVER

MINOR BASIN TENN. RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION TENNESSEE RIVER AT

BRIDGEPORT, ALABAMA 77

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
12	8	60	12	27	5140	154	31	123	1	6	16	1	1	13	1	3	1	1	3
2	13	61	2	21	5010	164	55	109	3	14	17	1	2	13	1	5	5	1	10
3	16	61	3	25	5070	145	61	84	3	19	15	4	2	9	0	5	5	1	13
5	17	61	5	25	5350	147	50	97	1	11	17	2	2	12	1	5	4	1	11
6	8	61	6	16	5255	168	65	103	2	17	20	3	2	15	0	7	7	1	11
6	27	61	7	5	5200	149	72	77	7	19	18	2	2	13	1	7	9	1	12
7	10	61	7	18	5300	169	61	108	2	15	20	4	2	14	0	7	6	1	10
7	20	61	7	28	5180	142	61	81	3	15	18	1	1	10	6	7	6	1	11
8	7	61	8	15	5220	140	59	81	3	13	17	3	1	12	1	7	6	1	12
8	22	61	8	30	5170	121	44	77	1	10	16	2	1	12	1	5	4	1	7
9	11	61	9	19	5210	115	37	78	2	9	10	2	1	7	0	4	3	0	9
9	28	61	10	6	5145	121	34	87	1	7	12	2	1	9	0	4	3	1	6

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE ALABAMA

MAJOR BASIN TENNESSEE RIVER

MINOR BASIN TENN. RIVER-MAIN STEM MINOR TRIB.

STATION LOCATION TENNESSEE RIVER AT

BRIDGEPORT, ALABAMA 77

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
11	9	60	14.2	8.1	7.2	2.7	13	1.8	3.2	.0	16	46	64	25	8	14	-	104	330
11	23	60	13.0	8.7	7.4	1.1	16	1.3	3.3	.0	18	48	64	20	15	25	-	121	1000
10	26	60	17.0	6.8	7.3	.9	22	1.7	3.4	.0	17	46	67	20	6	11	-	107	1500
12	7	60	10.4	9.5	7.6	2.5	13	1.4	3.6	.0	18	54	62	20	13	27	-	128	-
12	21	60	-	10.4	7.3	1.6	16	1.9	3.9	.0	12	55	54	30	28	27	-	122	680
1	5	61	5.7	11.1	7.3	2.2	16	.7	3.1	.0	12	58	51	35	23	17	-	80	-
1	18	61	5.5	11.0	7.6	.9	12	1.5	3.8	.0	15	55	62	20	10	16	-	104	-
2	1	61	4.0	11.8	7.1	1.7	14	1.7	4.2	.1	19	52	70	20	8	17	-	97	-
2	15	61	7.0	11.5	7.7	2.5	18	1.6	4.1	.0	17	56	56	20	11	26	-	120	330
3	2	61	9.6	10.9	7.4	1.2	12	1.5	-	.0	12	42	54	15	34	24	-	104	18000
3	15	61	11.3	10.8	7.4	3.7	15	2.0	5.2	.0	5	46	50	15	123	24	-	98	23000
3	29	61	12.4	8.8	7.4	2.8	15	1.3	3.4	.0	5	52	69	15	24	14	-	109	670
4	12	61	12.7	9.3	7.5	1.5	13	1.4	3.4	.0	7	51	66	20	25	10	-	90	3000
4	25	61	16.4	8.4	7.4	1.7	9	1.9	3.5	.0	7	46	65	15	17	12	-	99	-
5	10	61	16.9	7.7	7.5	1.6	19	1.8	3.9	.0	4	46	60	15	15	13	-	98	330
5	24	61	19.1	6.8	7.4	3.0	16	1.5	3.9	.0	4	50	60	15	16	19	-	98	5
6	7	61	21.6	6.5	7.4	.8	11	1.9	4.8	.0	7	56	68	5	14	20	-	79	*500
6	21	61	21.3	6.1	7.4	1.9	9	1.7	3.3	.0	7	49	61	20	15	16	-	78	500
7	5	61	23.9	5.7	7.3	.8	10	1.5	3.1	.0	8	50	64	15	11	17	-	95	1700
7	19	61	24.7	5.6	7.4	1.7	18	2.0	4.8	.0	8	50	65	20	14	14	-	91	-
8	2	61	26.7	5.2	7.3	1.3	14	1.2	3.1	.0	.8	55	72	20	6	10	-	106	3200
8	16	61	24.3	5.2	7.5	1.5	15	1.6	-	.0	15	56	76	10	9	12	-	138	-
8	30	61	25.8	5.4	7.2	.7	22	1.4	3.3	.0	16	56	86	15	8	15	-	113	4600
9	13	61	26.3	5.2	7.6	.7	24	1.4	3.1	.0	18	57	75	15	8	18	-	134	2800
9	27	61	22.5	6.0	7.4	.8	23	1.3	2.7	.0	17	54	76	5	7	16	-	140	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Hales Bar near Chattanooga, Tennessee
Operated by U.S. Geological Survey

STATE Alabama

MAJOR BASIN Tennessee River

MINOR BASIN Tennessee River-Main Stem & Minor Trib.

STATION LOCATION Tennessee River at Bridgeport, Alabama

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	29.400	39.200	46.600	45.600	25.100	89.200	29.900	31.400	28.200	33.700	36.400	32.700
2	21.500	37.900	41.500	44.800	20.900	79.000	25.400	33.300	29.600	23.100	37.200	41.400
3	25.700	36.800	36.600	40.700	28.400	74.500	28.800	34.100	18.700	23.900	39.000	41.600
4	31.500	37.400	21.300	39.400	24.900	63.900	18.500	30.400	10.200	26.200	39.000	39.100
5	31.700	34.300	25.500	33.500	18.600	56.900	14.700	28.400	23.900	30.100	41.700	39.500
6	31.700	30.800	34.900	29.600	25.600	55.000	19.700	25.500	26.100	35.000	36.200	37.500
7	26.100	36.300	29.000	28.000	26.600	72.600	16.200	21.300	33.900	32.000	36.000	39.300
8	27.000	41.100	27.300	23.100	35.500	135.000	25.000	24.200	37.900	37.000	37.500	40.600
9	22.200	37.000	26.400	27.300	30.200	180.000	20.300	31.600	31.400	26.800	39.500	42.600
10	26.300	36.800	23.800	30.400	31.300	172.000	28.500	35.200	17.900	30.300	36.000	35.300
11	34.900	34.000	21.700	32.300	28.000	147.000	27.700	30.800	12.500	33.200	34.500	41.700
12	34.900	30.500	37.200	29.800	18.600	112.000	27.300	34.300	22.300	36.600	42.000	39.000
13	35.500	24.900	37.600	30.300	20.900	96.800	32.300	26.400	33.800	38.300	40.400	38.500
14	33.600	31.300	35.600	24.100	17.600	95.300	33.100	20.000	34.400	39.500	37.400	37.200
15	29.700	33.500	36.600	16.500	14.000	85.200	29.600	24.200	32.600	40.400	34.000	34.900
16	30.500	29.500	34.800	20.700	11.600	63.500	22.400	21.200	37.200	36.500	37.500	34.900
17	38.100	35.500	29.600	33.100	14.500	53.300	39.000	16.500	39.600	37.600	38.000	33.600
18	39.200	41.400	29.400	30.400	12.400	53.800	39.100	20.100	37.400	35.800	38.000	30.400
19	38.900	34.700	25.200	29.300	20.900	55.600	38.300	21.500	26.400	33.400	42.300	33.600
20	39.100	37.000	31.000	31.200	32.300	48.800	34.900	24.600	21.600	30.900	37.200	33.800
21	41.400	35.700	41.400	36.300	48.000	44.000	28.100	28.100	35.200	33.900	38.200	31.000
22	38.800	32.300	37.400	30.600	69.800	39.000	20.000	20.700	41.600	37.800	35.200	35.200
23	26.600	35.000	29.100	27.200	146.000	36.700	20.000	21.100	39.900	32.800	34.900	34.400
24	30.600	32.200	31.100	37.400	169.000	37.800	22.400	28.800	35.000	35.500	38.000	25.800
25	33.900	32.800	31.100	40.300	169.000	36.800	16.800	25.900	39.100	30.700	41.000	28.700
26	38.600	30.500	29.900	33.400	145.000	29.800	26.200	24.300	31.400	35.100	37.000	37.400
27	42.700	28.300	30.400	27.000	107.000	31.200	34.700	29.300	31.800	36.700	34.000	39.000
28	40.800	32.600	36.800	30.400	96.600	36.700	31.800	28.800	32.600	35.700	38.000	36.500
29	35.600	36.000	33.700	27.000		25.100	27.000	28.200	37.700	40.700	38.500	40.400
30	34.900	42.800	36.700	23.500		21.400	26.200	27.200	36.500	38.700	40.500	29.600
31	36.900		45.400	24.000		32.700		27.700		36.300	40.500	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE TENNESSEE

MAJOR BASIN TENNESSEE RIVER

MINOR BASIN TENN. RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION TENNESSEE RIVER AT

CHATTANOOGA, TENNESSEE 51

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
10	5	60	10	17	-	-	-	0	15	15								
10	12	60	10	21	0	0	0	0	26	26								
10	19	60	11	1	-	-	-	0	18	18								
10	26	60	11	14	-	-	-	0	35	35								
11	2	60	11	23	-	-	-	0	91	91								
11	9	60	11	25	0	1	1	0	68	68								
11	16	60	12	16	-	-	-	0	35	35								
11	23	60	12	2	-	-	-	0	16	16								
11	30	60	12	20	-	-	-	0	9	9								
12	14	60	12	30	0	1	1	0	56	56								
12	28	60	1	17	-	-	-	0	47	47								
1	11	61	1	31	0	2	2	1	89	90								
1	25	61	2	8	-	-	-	4	160	164								
2	8	61	2	27	-	-	-	8	77	85								
2	20	61	3	14	-	-	-	10	33	43								
3	8	61	3	27	-	-	-	0	78	78								
3	22	61	4	10	-	-	-	0	26	26								
4	5	61	4	17	-	-	-	2	35	37								
4	19	61	5	5	-	-	-	0	33	33								
5	3	61	5	22	-	-	-	1	104	105								
5	17	61	6	5	-	-	-	2	79	81								
5	29	61	6	30	-	-	-	0	53	53								
6	14	61	7	7	1	0	1	0	63	63								
6	27	61	8	1	-	-	-	0	36	36								
7	12	61	8	4	0	0	0	0	80	80								
7	26	61	8	18	-	-	-	0	37	37								
8	9	61	9	8	-	-	-	4	53	57								
8	23	61	9	25	-	-	-	0	20	20								
9	5	61	10	5	0	1	1	0	4	4								
9	20	61	10	12	-	-	-	3	27	30								

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE TENNESSEE

MAJOR BASIN TENNESSEE RIVER

MINOR BASIN TENN. RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION TENNESSEE RIVER AT CHATTANOOGA, TENNESSEE

51

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS														PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
MONTH	DAY	YEAR	TOTAL	COCCOID	FILAMENTOUS	COCCOID	FILAMENTOUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PERCENTAGE	SECOND*	PERCENTAGE	THIRD*	PERCENTAGE	FOURTH*	PERCENTAGE	OTHER PERCENTAGE							
10	5	60	500			20		70	20	260	130	90	70	82	30	56	20	16	10	57	10	50	70	10	2				------
10	19	60	300					20	70	180	20	20	20	56	40	82	20	57	10	58	10	30	40	10	3				------
11	16	60	300			20		20	50	140	50	160	50	56	40	57	10	82	10	58	10	40			1				------
12	7	60	200						70	160		50	20	56	30	57	20	82	10	58	10	30			8				------
1	3	61	700						50	490	110	110	290	92	10	57	10	62	10	16	10	60		10	2				--9--
1	16	61	1200					20	50	1010	70	430	50	82	60	57	10	56	10	92	*	20		30	25				--9-7
2	6	61	3900					20	90	3620	160	160	70	82	40	92	20	57	20	56	*	20	20	20	21				--9-7
2	20	61	2100							1770	380	760	250	62	20	71	10	82	10	92	10	50		30	18		6		--9-7
3	6	61	600			20		340	50	200	20	20	180	62	10	82	10	92	10	56	10	60	20	10			2		-1---
3	20	61	200			20		20		90	50	50	160	57	30	56	10	92	10	2	10	40							------
4	3	61	100							90		20	70												2				------
4	17	61	500			20		20		400	50	20	50	56	50	82	20	62	*	70	*	30							--9-7
5	1	61	700			20		150	40	500	120	170	80	56	70	58	10	57	10	97	*	10	40		18	3			----7
5	15	61	100							110		20	50	56	60	58	20	57	10	97	*	20			10				------
6	5	61	1700			110		20		1410	120	250	120	58	50	56	20	59	20	9	*	10			47	2			4---7
6	19	61	400					20	70	250	110	90	50	56	50	58	30	47	10	83	*	10							--9-7
7	3	61	300					60		250		170	40	56	60	58	10	59	10	80	10	20			3				----7
7	17	61	400			20		60		230	100	80	100	56	40	47	20	62	10	21	*	30			2				----7
8	7	61	700		20	100		60	20	370	150	120	20	56	60	92	20	58	10	80	*	10		10	120	5			----7
8	21	61	200					90		70		90	20	56	50	58	10	92	10	47	10	30	20		43	4			------
9	5	61	600	20	20	190		40	40	230	80	60	40	56	50	58	10	89	10	57	10	40			31				------
9	18	61	500			40		40		350	80		60	56	60	58	10	92	10	89	10	20		10	3				------

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE TENNESSEE

MAJOR BASIN TENNESSEE RIVER

MINOR BASIN TENN. RIVER-MAIN STEM & MINOR TRIB.

STATION LOCATION TENNESSEE RIVER AT CHATTANOOGA, TENNESSEE 51

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	12	60	10	19	4970	135	25	110	1	5	10	1	1	7	1	3	2	1	3
11	9	60	11	16	4670	143	33	110	1	8	10	1	1	8	0	3	2	1	8
12	14	60	12	21	4590	125	21	104	0	5	9	1	1	7	0	2	1	0	4
1	11	61	1	18	3030	192	50	142	2	13	16	1	1	12	2	6	3	1	9
3	15	61	3	22	4600	140	46	94	2	9	17	2	2	12	1	6	3	0	9
4	12	61	4	19	4110	132	55	77	-	-	-	-	-	-	-	-	-	-	-
5	10	61	5	17	3860	124	49	75	-	-	-	-	-	-	-	-	-	-	-
6	7	61	6	14	3450	184	77	107	-	-	-	-	-	-	-	-	-	-	-
6	7	61		*	11420	145	60	85	2	19	18	3	2	12	1	6	6	1	8
7	12	61	7	19	3450	166	74	92	-	-	-	-	-	-	-	-	-	-	-
8	9	61	8	16	3500	179	61	118	-	-	-	-	-	-	-	-	-	-	-
9	13	61	9	20	4680	101	28	73	-	-	-	-	-	-	-	-	-	-	-
9	13	61		*	11630	143	51	92	3	14	13	2	1	10	0	5	5	1	10

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE TENNESSEE

MAJOR BASIN TENNESSEE RIVER

MINOR BASIN TENN. RIVER-MAIN STEM MINOR TRIB.

STATION LOCATION TENNESSEE RIVER AT

CHATTANOOGA, TENNESSEE 51

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	4	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
10	5	60	22.4	6.7	7.4	1.5	3	1.9	3.7	.0	15	48	72	7	10	11	-	116	-
10	11	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
10	12	60	21.8	6.6	7.4	.9	9	1.5	3.6	.1	9	50	76	5	15	13	-	108	-
10	18	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45
10	19	60	21.8	6.6	7.4	1.6	9	1.6	3.4	.0	9	49	78	6	8	15	-	105	-
10	26	60	19.0	-	7.4	-	-	-	-	-	14	52	76	5	10	-	-	-	-
11	1	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
11	2	60	16.8	7.6	7.4	2.8	10	1.6	3.1	.1	10	52	78	6	10	14	-	138	-
11	8	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29
11	9	60	14.5	-	7.4	-	-	-	-	-	13	51	80	6	7	-	-	-	-
11	15	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26
11	16	60	13.4	8.7	7.4	1.6	9	1.7	3.1	.0	9	51	80	5	5	12	-	111	-
11	22	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48
11	23	60	13.4	-	7.4	-	-	-	-	-	16	52	84	7	10	-	-	-	-
11	29	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	72
11	30	60	13.4	8.8	7.4	1.3	17	1.6	3.5	.0	18	46	76	8	10	27	-	142	-
12	7	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	310
12	13	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140
12	14	60	7.8	10.2	7.4	1.3	19	1.1	3.8	.0	19	51	80	13	10	23	-	135	-
12	27	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24
12	28	60	6.7	11.1	7.4	1.6	13	1.3	4.1	.0	14	50	76	7	5	19	-	126	-
1	5	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
1	10	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
1	11	61	5.6	11.5	7.4	3.0	17	1.5	3.4	.0	12	54	80	9	12	21	-	136	-
1	24	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
1	25	61	4.5	12.2	7.4	1.2	14	1.8	3.6	.0	12	48	80	10	10	19	-	94	-
2	7	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
2	8	61	4.5	11.4	7.3	2.2	18	2.8	6.1	.0	12	64	88	15	118	34	-	152	-
2	21	61	10.1	10.5	7.3	3.3	27	3.4	6.3	.0	7	51	68	20	155	30	-	130	36
3	7	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
3	8	61	12.9	8.9	7.1	3.0	19	2.2	5.2	.1	6	42	60	9	120	25	-	105	-
3	21	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180
3	22	61	12.3	9.8	7.3	1.5	13	1.4	4.0	.0	4	52	76	8	55	37	-	106	-
4	4	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56
4	5	61	12.3	9.0	7.3	1.6	15	1.4	3.4	.0	5	60	82	6	18	20	-	124	-
4	18	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
4	19	61	13.4	9.4	7.4	2.4	16	2.0	3.6	.0	6	47	64	6	23	17	-	109	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE TENNESSEE

MAJOR BASIN TENNESSEE RIVER

MINOR BASIN TENN. RIVER-MAIN STEM MINOR TRIB.

STATION LOCATION TENNESSEE RIVER AT

CHATTANOOGA, TENNESSEE 51

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
5	2	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150
5	3	61	16.2	8.8	7.5	1.6	19	1.2	3.1	.0	2	50	64	6	16	14	-	109	-
5	16	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36
5	17	61	19.0	7.3	7.5	1.8	21	1.4	3.7	.0	2	48	64	8	35	-	-	108	-
5	31	61	20.2	8.1	7.5	2.0	13	1.7	3.9	.0	3	53	70	3	27	15	-	102	-
6	13	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25
6	14	61	23.0	6.0	7.4	1.4	12	1.6	3.6	.0	4	54	68	4	45	17	-	127	-
6	28	61	22.4	6.6	7.4	2.0	20	1.4	3.3	.0	4	50	66	10	32	11	-	93	-
7	12	61	23.5	5.5	7.3	1.1	14	1.6	3.3	.0	5	45	58	7	20	21	-	86	-
7	25	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	900
7	26	61	25.2	5.4	7.3	1.2	22	1.4	3.2	.0	6	51	68	5	30	15	-	95	-
8	8	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5800
8	9	61	25.2	5.2	7.3	1.2	12	1.2	3.2	.0	7	56	68	4	28	12	-	106	-
8	16	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3100
8	22	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500
8	23	61	25.2	5.7	7.4	.8	23	1.1	2.6	.0	12	58	76	3	26	17	-	104	-
9	1	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400
9	6	61	25.8	5.8	7.4	1.9	22	1.5	3.4	.0	17	57	84	3	18	16	-	136	-
9	20	61	22.4	6.6	7.4	.9	21	1.1	3.0	.0	16	53	78	3	12	19	-	134	-
9	27	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4400

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Chattanooga, Tennessee
Operated by U.S. Geological Survey

STATE Tennessee

MAJOR BASIN Tennessee River

MINOR BASIN Tennessee River-Main Stem & Minor Trib.

STATION LOCATION Tennessee River at Chattanooga, Tennessee

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	27.800	40.000	44.400	36.300	23.800	79.700	21.300	33.000	28.200	32.100	35.800	31.200
2	20.600	34.200	38.900	38.300	20.300	72.200	21.300	33.200	31.800	21.000	37.500	39.000
3	37.100	37.000	33.500	33.400	28.100	64.600	26.000	35.500	20.400	24.900	39.500	40.100
4	31.900	34.700	15.900	37.200	23.800	57.000	16.900	30.600	10.300	26.900	37.500	38.900
5	30.500	32.800	23.700	27.900	17.800	52.200	13.100	28.400	23.600	30.700	39.100	39.600
6	32.100	29.500	33.900	25.400	25.400	54.300	17.600	25.100	26.800	35.900	33.300	36.300
7	24.100	35.600	25.400	24.700	24.400	68.800	12.500	20.900	32.700	30.800	36.100	38.400
8	27.000	40.600	24.000	20.100	34.700	136.000	23.100	25.100	37.700	36.000	36.600	39.600
9	19.500	34.400	25.500	25.800	24.900	174.000	17.600	32.700	31.700	25.400	40.000	39.300
10	24.800	35.000	21.900	28.400	29.400	166.000	25.300	36.000	19.000	29.900	34.800	32.700
11	34.200	33.600	19.800	29.200	25.900	130.000	24.600	30.400	12.600	32.700	33.400	38.500
12	33.700	30.000	34.700	28.100	18.200	103.000	22.100	35.600	21.500	37.400	39.700	38.400
13	35.300	22.800	33.400	27.900	20.000	91.500	25.800	28.000	33.500	38.600	35.800	38.300
14	33.100	30.400	32.300	20.500	17.000	91.700	27.500	21.500	34.200	40.300	37.200	36.300
15	28.200	33.300	32.800	16.000	14.800	80.100	24.300	24.300	32.000	39.500	33.600	35.900
16	29.300	29.200	31.400	18.200	11.700	58.800	16.200	21.700	35.600	33.300	38.000	30.900
17	38.400	35.300	26.700	34.000	15.000	49.400	35.600	19.200	37.800	38.400	38.100	30.600
18	38.500	40.500	26.400	28.100	12.000	51.400	37.200	17.500	34.900	35.600	37.700	28.300
19	38.100	30.200	24.700	28.000	18.200	51.800	36.800	22.500	24.200	33.400	40.400	33.700
20	35.500	37.000	31.500	29.700	29.100	40.900	34.700	24.300	18.700	30.600	33.000	34.400
21	39.500	33.100	38.100	34.900	41.200	39.300	27.100	28.500	28.900	32.900	38.100	31.300
22	37.700	32.000	31.400	28.100	53.900	32.200	18.700	20.300	37.400	37.300	33.300	34.800
23	24.700	32.000	24.900	25.200	141.000	31.500	18.100	19.700	36.700	31.200	36.100	31.700
24	30.000	27.400	28.000	35.400	160.000	33.800	21.000	28.700	32.800	35.200	38.000	21.300
25	34.000	31.200	28.600	38.600	153.000	33.500	20.700	25.700	38.600	30.100	41.000	29.000
26	37.200	27.100	26.900	30.400	126.000	26.000	24.900	23.600	29.600	34.200	36.800	38.500
27	43.400	25.900	27.300	24.800	95.500	31.000	34.200	28.500	30.500	37.300	34.000	39.600
28	39.800	31.400	33.600	29.000	89.100	32.500	32.100	28.000	32.200	35.100	38.100	37.400
29	34.100	33.700	30.700	23.000		21.500	27.500	28.100	36.800	40.600	38.400	41.500
30	34.400	40.600	31.800	23.200		20.300	26.700	27.000	34.800	35.100	40.300	28.000
31	37.400		40.800	23.600		29.900		28.600		37.100	40.600	

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE MISSISSIPPI
MAJOR BASIN SOUTHEAST
MINOR BASIN UPPER TOMBIGBEE RIVER
STATION LOCATION TOMBIGBEE RIVER BELOW COLUMBUS, MISSISSIPPI

95

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES											
BEGINNING			END								NEUTRALS									
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
9	1	61	9	18	5414	161	45	116	1	7	22	3	2	15	2	7	2	1	5

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Computed Data for Columbus, Mississippi
Operated by U.S. Geological Survey

STATE Mississippi

MAJOR BASIN Southeast

MINOR BASIN Upper Tombigbee River

STATION LOCATION Tombigbee River below Columbus, Mississippi

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	1.660	4.180	2.950	10.600	2.870	34.400	56.600	5.260	1.860	1.430	1.070	1.300
2	1.440	3.980	2.710	13.200	2.850	28.500	62.100	5.620	1.750	1.360	1.040	1.350
3	1.270	3.440	2.510	13.300	3.210	23.400	56.700	5.790	1.620	1.340	.975	1.460
4	1.110	3.170	2.330	13.600	4.380	19.000	51.900	4.920	1.500	1.370	.881	1.710
5	1.010	2.760	2.210	13.200	4.260	14.800	44.300	4.090	1.440	1.300	.875	2.010
6	1.190	2.470	2.130	11.000	3.880	11.700	35.400	3.680	1.440	1.210	.844	1.790
7	1.760	2.240	2.080	9.650	3.580	11.700	28.800	4.100	2.330	2.240	.838	1.670
8	2.490	1.920	2.040	7.960	5.920	22.100	22.600	5.860	2.650	3.180	.859	1.840
9	3.540	1.700	2.040	5.890	9.000	28.200	20.800	6.420	2.950	3.410	1.970	1.690
10	4.190	1.960	2.020	4.670	8.200	24.400	19.000	8.080	2.690	2.560	1.860	1.530
11	3.220	4.650	2.060	4.000	6.430	21.900	16.000	6.300	3.030	1.830	1.370	1.360
12	2.630	4.280	3.000	3.480	5.400	20.800	17.000	5.530	2.760	4.750	1.050	1.210
13	2.300	3.770	3.740	3.140	4.870	21.500	20.600	4.880	2.630	7.850	.879	1.120
14	1.990	3.290	3.180	2.990	4.630	26.100	19.400	4.080	2.450	8.140	.779	1.060
15	1.670	2.840	2.870	3.140	4.450	25.300	19.700	3.730	2.250	7.210	.702	1.070
16	1.390	2.530	2.640	3.690	4.120	24.100	18.700	6.970	2.010	8.140	2.340	1.220
17	1.370	2.470	2.610	3.800	3.840	21.400	15.400	8.430	1.920	6.400	6.910	1.090
18	1.450	2.940	2.440	3.490	5.130	22.300	12.400	6.500	1.880	4.940	9.330	.995
19	1.360	2.670	6.420	9.300	12.900	24.900	10.400	4.630	1.760	3.780	9.080	.929
20	1.220	2.540	2.220	5.510	24.300	22.000	8.390	3.500	2.280	2.660	5.520	.877
21	1.710	2.350	2.880	6.870	44.500	22.900	7.120	2.940	7.490	2.160	2.990	.840
22	2.050	2.210	4.850	5.580	62.800	23.100	6.320	2.640	7.880	1.980	2.140	.799
23	2.160	2.780	4.150	4.420	94.100	21.900	5.640	2.420	5.250	1.890	1.730	.787
24	1.770	5.470	3.630	3.860	101.000	20.800	5.040	2.630	3.630	1.750	1.490	.767
25	1.570	5.120	3.140	3.520	82.800	18.300	4.550	2.640	2.840	2.370	2.480	.742
26	1.440	4.330	2.900	3.670	65.100	16.300	4.380	2.510	2.630	2.770	2.730	.724
27	1.300	3.760	2.780	4.350	52.600	14.300	6.560	2.450	2.230	2.500	2.940	.696
28	1.170	3.150	2.620	4.230	43.500	18.100	9.780	2.640	1.960	1.990	2.290	.681
29	1.090	2.820	2.510	3.660		27.600	8.560	2.630	1.770	1.800	1.800	.662
30	1.060	2.850	3.720	3.260		29.100	6.710	2.290	1.650	1.490	1.570	.659
31	1.660		8.030	3.000		39.300		2.040		1.330	1.400	

Computed as sum of Tombigbee River at Columbus, Mississippi plus 3 times the sum of Luxapalila Creek at Steens, Mississippi.

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE CALIFORNIA

MAJOR BASIN GREAT BASIN

MINOR BASIN NORTHWESTERN LAHONTAN

STATION LOCATION TRUCKEE RIVER, CAL-NEV BORDER AT FARAD, CALIFORNIA

88

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA				DATE OF DETERMINATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
9	29	61	10	13	0	0	0	0	0	0									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE CALIFORNIA

MAJOR BASIN GREAT BASIN

MINOR BASIN NORTHWESTERN LAHONTAN

STATION LOCATION TRUCKEE RIVER, CAL-NEV BORDER AT FARAD, CALIFORNIA

88

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFIERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
9	29	61	400	20						40	310	40	190	64	10	58	10	16	10	71	10	70			2				------

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Farad, California
Operated by U.S. Geological Survey

STATE California

MAJOR BASIN Great Basin

MINOR BASIN Northwestern Lahontan

STATION LOCATION Truckee Riv., Calif.-Nev. Border at Farad, California

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	.404	.224	.280	.223	.218	.245	.348	.574	.465	.469	.452	.146
2	.404	.224	.331	.204	.196	.207	.396	.495	.773	.465	.469	.212
3	.415	.224	.286	.211	.216	.209	.559	.490	.736	.482	.469	.237
4	.423	.257	.268	.216	.194	.200	.648	.504	.613	.469	.452	.232
5	.419	.237	.260	.209	.183	.196	.536	.465	.569	.452	.427	.249
6	.427	.232	.302	.228	.183	.194	.440	.444	.555	.473	.423	.246
7	.423	.218	.355	.214	.179	.209	.460	.419	.513	.473	.448	.243
8	.404	.214	.352	.172	.177	.232	.407	.427	.478	.465	.436	.240
9	.419	.208	.345	.170	.192	.235	.423	.517	.504	.460	.427	.234
10	.407	.206	.363	.170	.469	.238	.411	.710	.469	.456	.419	.243
11	.396	.208	.334	.168	.404	.235	.444	.623	.522	.482	.415	.229
12	.392	.243	.338	.167	.321	.232	.588	.518	.482	.490	.411	.234
13	.396	.237	.321	.163	.287	.235	.522	.527	.531	.490	.419	.229
14	.407	.243	.321	.163	.269	.248	.513	.545	.574	.478	.407	.214
15	.423	.237	.315	.160	.238	.264	.490	.588	.513	.473	.404	.200
16	.404	.280	.324	.161	.232	.245	.559	.574	.499	.469	.400	.234
17	.396	.280	.341	.158	.242	.250	.588	.623	.499	.460	.396	.226
18	.407	.296	.338	.155	.223	.248	.555	.658	.504	.460	.396	.189
19	.415	.289	.315	.153	.237	.256	.473	.715	.499	.469	.396	.125
20	.415	.274	.308	.153	.270	.272	.490	.741	.536	.460	.392	.112
21	.415	.268	.305	.153	.275	.281	.486	.730	.508	.460	.290	.112
22	.411	.260	.305	.150	.284	.296	.513	.689	.490	.456	.165	.125
23	.355	.251	.311	.152	.272	.338	.527	.663	.486	.452	.160	.120
24	.251	.251	.302	.152	.281	.308	.527	.613	.473	.448	.157	.115
25	.251	.245	.296	.150	.290	.293	.508	.633	.473	.444	.152	.112
26	.243	.254	.289	.157	.278	.290	.531	.598	.486	.448	.147	.107
27	.240	.260	.286	.161	.275	.287	.522	.469	.469	.456	.144	.104
28	.234	.243	.279	.158	.272	.293	.527	.460	.444	.448	.142	.107
29	.234	.245	.221	.153		.284	.564	.423	.452	.448	.141	.104
30	.226	.240	.221	.155		.293	.583	.388	.473	.452	.145	.096
31	.226		.237	.210		.315		.404		.448	.139	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE WASHINGTON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN YAKIMA RIVER

STATION LOCATION YAKIMA RIVER AT

RICHLAND, WASHINGTON 89

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER								RADIOACTIVITY IN PLANKTON (dry)				RADIOACTIVITY IN WATER		
			DATE OF DETERMINATION		ALPHA			BETA			DATE OF DETERMINATION		GROSS ACTIVITY		GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL			ALPHA	BETA	SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	MO.	DAY	μμc/g	μμc/g	μμc/l	μμc/l	μμc/l
4	21	61	5	10	0	0	0	0	0	0							
5	2	61	5	25	1	0	1	0	0	0							
5	8	61	5	26	0	0	0	0	0	0							
5	15	61	6	2	0	0	0	0	0	0							
5	22	61	6	14	0	0	0	0	0	0							
5	29	61	6	20	1	0	1	0	0	0							
6	15	61	7	7	0	0	0	1	0	1							
6	19	61	7	27	1	0	1	0	0	0							
6	26	61	7	31	0	0	0	1	0	1							
7	3	61	8	1	0	2	2	0	1	1							
7	10	61	8	4	0	1	1	0	2	2							
7	17	61	8	14	0	3	3	0	3	3							
7	24	61	8	18	0	5	5	2	10	12							
7	31	61	8	31	0	2	2	0	5	5							
8	7	61	9	8	0	1	1	0	16	16							
8	14	61	9	29	0	3	3	1	6	7							
8	21	61	9	13	0	0	0	1	10	11							
8	28	61	9	28	0	3	3	1	7	8							
9	5	61	10	5	0	1	1	1	9	10							
9	11	61	10	6	0	3	3	1	22	23							
9	18	61	10	16	0	2	2	1	5	6							
9	25	61	10	9	0	1	1	5	9	14							

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE WASHINGTON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN YAKIMA RIVER

STATION LOCATION YAKIMA RIVER AT RICHLAND, WASHINGTON

89

DATE OF SAMPLE			ALGAE (Number per ml.)									INERT DIATOM SHELLS (No. per ml.)		DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*)									OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES					DOMINANT GENERA (See Introduction for Identification)
				BLUE-GREEN		GREEN		FLAGELLATES (Pigmented)		DIATOMS																			
MONTH	DAY	YEAR	TOTAL	COCCOID	FILA-MENT-OUS	COCCOID	FILA-MENT-OUS	GREEN	OTHER	CENTRIC	PENNATE	CENTRIC	PENNATE	FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE		PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	
4	21	61	1400					80	20	290	970	120	1010	92	10	36	10	16	10	61	10	70	20		3		1		---7-
5	15	61	600			20		50	20	270	270	70	1230	92	20	36	20	61	20	16	*	40			3		3		--9--
6	15	61	1400			100		80	40	250	910	40	700	61	20	92	10	36	10	16	*	50			5				---7-
6	19	61	900					20		310	540	70	1410	61	30	92	30	46	10	62	10	30							---77
7	3	61	15700	90	70	560		890		3080	11040	490	2460	92	60	70	10	26	10	36	*	20			4				74763
7	17	61	12600	150	230	2920		1260		5360	2680	990	1720	92	70	82	10	26	10	59	*	10			46				48977
8	7	61	25100	120	250	2050		9990	20	7720	3110	730	1450	92	90										27				71937
8	21	61	10100		270	1060		660		4780	3350	250	2380	92	80	26	*	76	*	15	*	10			22	5	2		48977
9	5	61	5000	20		350		460		1760	2380	190	1930	92	80	26	*	16	*	70	*	20			47	3	2	1	74-37
9	18	61	4000		40	310		80		1450	2130	150	990	92	70	64	10	26	10	65	*	10			14	1		1	48973

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE WASHINGTON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN YAKIMA RIVER

STATION LOCATION YAKIMA RIVER AT RICHLAND, WASHINGTON

89

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
3	29	61	5	3	3010	182	83	99	2	17	38	14	6	17	1	9	5	1	11
5	17	61	6	16	2050	194	61	133	1	14	24	4	3	16	1	8	9	1	4
6	16	61	7	7	4250	102	30	72	1	7	13	4	2	7	0	4	1	1	3
7	7	61	8	15	3540	104	26	78	0	4	13	4	2	7	0	6	1	0	2
8	15	61	9	12	3000	116	38	78	1	8	16	5	2	9	0	7	2	0	4
9	12	61	10	5	2470	146	31	115	1	6	16	2	2	11	1	5	1	1	1

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE WASHINGTON

MAJOR BASIN PACIFIC NORTHWEST

MINOR BASIN YAKIMA RIVER

STATION LOCATION YAKIMA RIVER AT RICHLAND, WASHINGTON 89

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
5	8	61	12.2	10.4	7.8	1.7	-	-	-	-	-	-	56	-	-	-	-	-	-
5	15	61	15.2	8.2	7.7	.2	-	-	-	.2	3	40	53	-	-	-	-	87	-
5	22	61	15.2	9.6	7.6	1.4	-	-	-	.2	3	40	46	-	-	-	-	129	-
6	12	61	16.4	8.7	7.8	.7	-	-	-	-	10	70	52	-	-	-	-	102	-
6	19	61	22.1	8.0	7.9	1.4	-	-	-	.2	4	70	50	-	-	-	-	123	130
6	26	61	23.5	8.8	8.0	1.0	-	-	-	.1	4	80	64	-	-	-	-	141	-
7	3	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33
7	17	61	25.7	11.0	8.1	3.0	-	-	-	.1	4	150	58	-	-	-	-	164	-
7	24	61	25.6	11.5	8.6	5.5	-	-	-	.2	5	140	65	-	-	-	-	163	100
7	31	61	25.9	12.5	8.4	5.0	-	-	-	.1	5	150	104	-	-	-	-	208	*33
8	7	61	25.6	12.7	8.4	6.5	-	-	-	.1	15	160	120	-	10	-	-	204	*100
8	14	61	25.4	10.0	8.7	3.4	-	-	-	.1	10	160	125	-	45	28	-	218	-
8	21	61	25.6	9.6	8.3	4.0	-	-	-	.1	12	160	90	-	18	35	-	177	*33
8	28	61	22.4	10.0	8.3	-	-	-	-	.1	12	170	120	-	41	58	-	157	230
9	11	61	19.6	9.3	8.7	2.2	-	-	-	.1	15	180	90	-	20	30	-	141	120
9	18	61	19.2	10.0	8.2	3.0	-	-	-	.1	10	180	140	-	11	30	.2	133	-
9	25	61	16.4	9.2	8.5	.9	-	-	-	.1	15	170	130	-	6	25	-	163	67

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station at Kiona, Washington
Operated by U.S. Geological Survey

STATE Washington

MAJOR BASIN Pacific Northwest

MINOR BASIN Yakima River

STATION LOCATION Yakima River at Richland, Washington

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	2.200	2.280	2.810	1.800	3.240	6.700	7.250	8.660	9.720	1.770	1.370	1.800
2	2.120	2.270	2.730	1.780	3.400	6.320	7.140	9.700	9.420	1.690	1.570	1.670
3	1.860	2.310	2.710	1.790	7.820	6.810	7.630	10.100	9.940	1.380	1.460	1.790
4	1.780	2.410	2.700	1.780	5.280	6.590	8.740	10.200	10.900	1.330	1.280	1.800
5	1.740	2.350	2.670	1.780	4.550	6.430	9.640	9.900	11.200	1.400	1.140	1.830
6	1.710	2.310	2.560	1.800	4.380	6.070	9.540	9.180	11.500	1.500	1.120	1.680
7	1.690	2.280	2.460	2.520	4.690	5.890	8.410	8.490	11.300	1.660	1.170	1.670
8	1.770	2.220	2.350	3.010	5.560	5.690	7.420	7.650	10.500	1.780	1.340	1.590
9	1.850	2.180	2.320	2.840	5.730	5.510	6.470	6.890	9.620	1.480	1.370	1.480
10	1.880	2.150	2.270	2.850	6.270	5.370	6.190	6.980	8.860	1.350	1.310	1.450
11	1.880	2.140	2.220	2.890	10.100	5.190	5.830	7.360	8.220	1.210	1.300	1.430
12	1.960	2.090	2.070	2.810	10.000	5.010	5.470	7.540	7.800	1.140	1.310	1.400
13	1.900	2.370	2.100	2.670	8.880	5.260	5.060	7.400	7.270	1.100	1.310	1.350
14	1.830	2.570	2.200	2.610	7.860	5.470	4.910	7.670	5.420	1.070	1.300	1.340
15	2.220	2.490	2.320	2.590	7.840	6.490	4.890	7.460	4.330	1.160	1.480	1.400
16	2.360	2.430	2.390	2.950	7.400	8.110	4.450	7.400	4.190	1.100	1.570	1.470
17	2.230	2.350	2.190	3.620	7.520	8.720	4.240	7.380	4.580	1.130	1.750	1.530
18	2.180	2.520	2.200	4.820	7.100	8.370	4.110	7.420	5.820	1.140	1.690	1.620
19	2.030	2.870	2.300	4.620	6.700	7.840	4.500	7.880	7.140	1.080	1.710	1.570
20	2.730	3.310	2.300	4.210	6.340	7.710	4.750	8.390	8.470	1.040	1.770	1.560
21	3.030	3.060	2.260	3.900	6.470	8.350	4.380	9.760	8.280	.905	1.690	1.560
22	2.880	3.320	2.270	3.700	7.380	7.990	4.260	11.000	6.320	.852	1.490	1.590
23	2.850	3.340	2.200	3.500	9.820	7.480	4.820	12.000	4.570	.896	1.400	1.710
24	2.720	3.040	2.180	3.250	10.000	7.380	5.420	11.800	3.590	1.100	1.340	1.670
25	2.490	3.180	2.180	3.140	8.720	7.380	5.310	11.300	3.580	1.100	1.340	1.670
26	2.460	4.670	2.200	3.130	8.110	7.500	4.890	10.200	3.720	1.400	1.410	1.770
27	2.410	3.590	2.310	2.950	7.520	8.640	4.790	9.600	3.460	1.160	1.410	1.770
28	2.380	3.190	2.040	2.710	6.970	7.900	5.400	10.900	3.260	1.110	1.940	1.790
29	2.340	3.000	2.020	2.540		7.140	5.830	10.800	2.630	1.060	2.030	1.720
30	2.340	2.870	1.940	2.530		6.890	6.740	10.300	1.460	1.040	1.710	1.840
31	2.360		1.900	2.660		6.950		9.940		1.130	1.660	

WATER QUALITY BASIC DATA

RADIOACTIVITY DETERMINATIONS

STATE MONTANA
MAJOR BASIN MISSOURI RIVER
MINOR BASIN YELLOWSTONE RIVER
STATION LOCATION YELLOWSTONE RIVER NEAR
SIDNEY, MONTANA 55

DATE SAMPLE TAKEN			RADIOACTIVITY IN WATER									RADIOACTIVITY IN PLANKTON (dry)					RADIOACTIVITY IN WATER		
			DATE OF DETERMI-NATION		ALPHA			BETA				DATE OF DETERMI-NATION		GROSS ACTIVITY			GROSS ACTIVITY		
					SUSPENDED	DISSOLVED	TOTAL	SUSPENDED	DISSOLVED	TOTAL				ALPHA	BETA		SUSPENDED	DISSOLVED	TOTAL
MO.	DAY	YEAR	MONTH	DAY	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l	μμc/l		MO.	DAY	μμc/g	μμc/g		μμc/l	μμc/l	μμc/l
10	24	60*	11	14	8	11	19	0	0	0									
11	28	60*	12	8	0	11	11	0	0	0									
12	26	60	1	23	4	10	14	0	0	0									
1	30	61*	2	13	0	20	20	0	0	0									
2	27	61*	3	14	0	5	5	1	0	1									
3	27	61*	4	12	8	7	15	15	0	15									
4	24	61*	5	12	1	3	4	0	0	0									
5	29	61*	6	12	15	10	25	15	1	16									
6	19	61*	7	21	2	1	3	41	2	43									
7	31	61*	8	23	12	3	15	35	12	47									
8	28	61*	9	14	0	4	4	8	13	21									
9	5	61	10	5	-	-	-	30	22	52									
9	11	61	10	20	-	-	-	74	41	115									
9	18	61	10	6	-	-	-	696	18	714									
9	25	61	11	8	103	4	107	0	21	21									

WATER QUALITY BASIC DATA

PLANKTON POPULATION

NUMBER PER MILLILITER, EXCEPT MACROPLANKTON

STATE MONTANA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN YELLOWSTONE RIVER

STATION LOCATION YELLOWSTONE RIVER NEAR SIDNEY, MONTANA

DATE OF SAMPLE MONTH	DAY	YEAR	ALGAE (Number per ml.) TOTAL	BLUE-GREEN COCCOID	BLUE-GREEN FILA-MENT-OUS	GREEN COCCOID	GREEN FILA-MENT-OUS	FLAGELLATES (Pigmented) GREEN	FLAGELLATES (Pigmented) OTHER	DIATOMS CENTRIC	DIATOMS PENNATE	INERT DIATOM SHELLS (No. per ml.) CENTRIC	INERT DIATOM SHELLS PENNATE	DIATOMS DOMINANT SPECIES AND PERCENTAGES (See Introduction for Code Identification*) FIRST*	PER-CENTAGE	SECOND*	PER-CENTAGE	THIRD*	PER-CENTAGE	FOURTH*	PER-CENTAGE	OTHER PER-CENTAGE	OTHER MICROPLANKTON, FUNGI AND SHEATHED BACTERIA (No. per ml.)	MICROINVERTEBRATES PROTOZOA (No. per ml.)	ROTIFERS (No. per liter)	CRUSTACEA (No. per liter)	NEMATODES (No. per liter)	OTHER ANIMAL FORMS (No. per liter)	DOMINANT GENERA (See Introduction for Identification)
10	17	60	4200			160		110		800	3130	150	1430	92	50	65	10	36	10	26	*	30	70						74766
11	7	60	1100			50		20		70	950		420	92	50	65	10	36	10	66	*	30	180			1			---7-
11	21	60	900			50		20			820		360	92	40	36	30	65	10	97	*	30	10		2				7--4-
12	5	60	200								150	20	20	92	70	36	*	64	*	67	*	20	20						-----
12	19	60	100			20		20		40	20		20	92	50	64	10	70	*	26	*	40							-----
1	2	61	200							20	200		200	92	60	64	10	70	*	65	*	30							-----
1	16	61	300			50		20			250	50	200	92	60	36	10	26	10	71	10	20							-----
2	6	61									20	20	180	92	60	36	10	71	10	47	*	20							-----
2	20	61	500							90	360		250	92	40	36	10	21	*	64	*	40							-----
3	6	61	1100					130		110	860	20	400	92	30	86	10	51	10	36	*	50					2		---7-
3	20	61	3600			20		70		50	3460	20	2470	92	20	86	10	71	*	75	*	60							--773
4	3	61	4400			20		1400		580	2380	20	1440	92	50	65	10	51	10	66	10	40					2	1	7473-
5	1	61	16000			230		2110		10540	3130	270	910	92	30	83	20	82	10	65	*	30			2	3			71963
5	15	61	8300		40	770		1740	210	3270	2300	1300	640	92	30	82	20	47	20	83	10	20		20	3				71925
6	5	61	1900					40		100	1800		500	92	40	36	10	41	10	12	10	50							7-74-
6	19	61	800			40		40		110	560	90	2080	47	30	92	30	36	10	78	*	30							---7-
7	3	61	3700	70		710				2210	720	4160	2660	47	50	92	20	23	10	36	10	20	20						4897-
7	17	61	200					20		50	130		540	47	50	92	10	36	10	23	*	30							-----
8	7	61	9600	100		2920		250		1720	4640	750	580	65	10	92	10	55	10	41	*	80							-4153
8	21	61	14000	40	150	4660		310	40	1080	7740	660	2130	75	50	92	10	26	*	54	*	30			1				78323
9	5	61	10800	20		2010		360		340	8110	250	1630	95	10	92	10	67	10	65	10	70							7-763
9	18	61	400		20			70		40	310	70	1050										50						-----

NATIONAL WATER QUALITY NETWORK

ORGANIC CHEMICALS

RECOVERED BY CARBON FILTER TECHNIQUE

RESULTS IN MICROGRAMS PER LITER
(Parts per billion)

STATE MONTANA
MAJOR BASIN MISSOURI RIVER
MINOR BASIN YELLOWSTONE RIVER
STATION LOCATION YELLOWSTONE RIVER NEAR
SIDNEY, MONTANA

55

DATE OF SAMPLE					GALLONS FILTERED	EXTRACTABLES			CHLOROFORM EXTRACTABLES										
BEGINNING			END								NEUTRALS								
MONTH	DAY	YEAR	MONTH	DAY		TOTAL	CHLORO-FORM	ALCOHOL	ETHER INSOLUBLES	WATER SOLUBLES	TOTAL	ALIPHATICS	AROMATICS	OXYGEN-ATED COMPOUNDS	LOSS	WEAK ACIDS	STRONG ACIDS	BASES	LOSS
10	3	60	10	10	5000	117	15	102	0	3	7	1	1	5	0	1	1	1	2
11	7	60	11	14	3000	135	17	118	0	3	8	2	1	5	0	3	1	1	1
12	5	60	12	12	5000	93	21	72	0	4	9	2	1	6	0	2	1	0	5
1	9	61	1	16	5000	103	19	84	0	3	10	2	1	7	0	2	1	1	2
2	6	61	2	13	5000	149	46	103	0	4	34	17	7	8	2	2	1	1	4
3	6	61	3	13	5000	85	32	53	1	9	11	1	1	8	1	4	2	1	4
4	3	61	4	10	5000	109	29	80	0	6	14	2	2	10	0	3	1	1	4
5	1	61	5	8	5000	85	33	52	-	-	-	-	-	-	-	-	-	-	-
6	5	61	6	12	5000	61	21	40	-	-	-	-	-	-	-	-	-	-	-
6	5	61		*	10000	73	27	46	1	6	13	4	1	8	0	2	1	1	3
7	3	61	7	10	5000	84	26	58	-	-	-	-	-	-	-	-	-	-	-
8	7	61	8	14	4500	118	34	84	-	-	-	-	-	-	-	-	-	-	-
9	5	61	9	12	4500	94	31	63	-	-	-	-	-	-	-	-	-	-	-
9	5	61		*	14000	98	30	68	2	8	9	2	1	6	0	2	2	1	6

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MONTANA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN YELLOWSTONE RIVER

STATION LOCATION YELLOWSTONE RIVER NEAR SIDNEY, MONTANA 55

DATE OF SAMPLE MONTH	DAY	YEAR	TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND 1-HOUR mg/l	CHLORINE DEMAND 24-HOUR mg/l	AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
10	3	60	12.2	-	8.4	-	-	-	-	-	5	200	322	-	1360	333	-	744	-
10	11	60	12.2	-	8.5	-	-	-	-	-	5	200	322	-	100	340	-	758	-
10	17	60	9.0	10.1	8.4	-	-	1.7	-	-	6	206	358	-	140	394	-	820	-
10	24	60	8.9	10.1	8.3	-	-	1.7	5.4	-	2	206	334	-	460	340	-	712	-
10	31	60	4.6	11.2	8.4	-	-	1.2	5.4	-	2	188	316	-	40	315	-	710	-
11	7	60	3.4	11.3	8.4	-	-	.7	-	-	6	198	326	-	40	323	-	686	-
11	14	60	5.5	11.5	8.4	-	-	.9	3.6	-	6	210	330	-	30	307	-	698	-
11	21	60	5.7	10.5	8.4	-	-	1.2	3.9	-	9	212	334	-	45	299	-	706	-
11	28	60	.0	12.2	8.3	-	-	.9	6.3	-	6	208	338	-	120	315	-	734	-
12	5	60	.0	11.4	8.4	-	-	.7	-	-	15	240	386	-	20	360	-	844	-
12	12	60	.0	12.3	8.4	-	-	.9	3.2	-	13	234	386	-	20	360	-	748	-
12	19	60	.0	11.9	8.3	-	-	1.3	3.4	-	17	234	392	-	25	315	-	812	-
12	26	60	.0	-	8.2	-	-	-	-	-	6	254	400	-	20	315	-	820	-
1	2	61	.0	-	8.2	-	-	-	-	-	1	232	376	-	30	307	-	750	-
1	9	61	.0	-	8.2	-	-	-	-	-	7	228	366	-	25	315	-	750	-
1	16	61	.0	11.8	8.2	-	-	1.4	3.4	-	14	216	348	-	40	295	-	712	-
1	23	61	.0	12.0	8.2	-	-	1.4	2.9	-	12	208	336	-	25	245	-	664	50
1	30	61	.0	12.5	8.3	-	-	1.1	2.8	-	1	222	364	-	20	340	-	726	-
2	6	61	.0	10.6	8.1	-	-	1.5	3.1	-	7	240	398	-	20	333	-	804	-
2	13	61	.0	11.8	8.1	-	-	1.2	2.9	-	12	196	310	-	70	239	-	640	-
2	20	61	.0	12.2	8.2	-	-	.8	2.4	-	11	174	290	-	35	239	-	590	-
2	27	61	.0	12.2	8.3	-	-	1.3	2.8	-	10	160	288	-	150	264	-	632	-
3	6	61	.0	11.5	8.3	-	-	1.5	-	-	12	176	300	-	150	299	-	656	-
3	13	61	.0	11.1	8.2	-	-	.8	2.7	-	16	170	302	-	340	285	-	620	*60
3	20	61	.0	9.4	8.4	-	-	-	-	-	19	160	286	-	1350	285	-	632	-
3	27	61	.0	11.1	8.4	-	-	-	-	-	5	176	328	-	500	323	-	712	-
4	3	61	9.1	10.3	8.4	-	-	1.1	4.8	-	16	178	334	-	240	333	-	744	-
4	10	61	7.1	-	8.5	-	-	-	-	-	22	186	338	-	240	333	-	788	-
4	17	61	8.1	11.2	8.3	-	-	1.2	3.8	-	20	198	362	-	380	308	-	910	-
4	24	61	7.6	11.2	8.4	-	-	1.3	4.3	-	20	180	344	-	180	421	-	926	-
5	1	61	12.1	-	8.5	-	-	-	-	-	45	180	354	-	300	407	-	934	-
5	8	61	10.2	10.5	8.4	-	-	1.6	4.8	-	16	186	328	-	100	360	-	790	-
5	15	61	16.4	-	8.5	-	-	-	-	-	16	164	288	-	60	315	-	760	-
5	22	61	18.7	-	8.5	-	-	-	-	-	14	166	288	-	500	299	-	710	-
5	29	61	21.5	-	8.2	-	-	-	-	-	6	124	178	-	8800	147	-	368	-
6	5	61	21.5	-	8.2	-	-	-	-	-	3	74	102	-	2200	75	-	244	-
6	12	61	22.8	-	8.1	-	-	-	-	-	4	72	84	-	800	54	-	177	-
6	19	61	22.1	-	8.2	-	-	-	-	-	10	72	98	-	430	69	-	234	-
7	3	61	24.4	-	8.5	-	-	-	-	-	9	97	132	-	180	106	-	298	-

NATIONAL WATER QUALITY NETWORK

CHEMICAL, PHYSICAL AND BACTERIOLOGICAL ANALYSES

STATE MONTANA

MAJOR BASIN MISSOURI RIVER

MINOR BASIN YELLOWSTONE RIVER

STATION LOCATION YELLOWSTONE RIVER NEAR SIDNEY, MONTANA

55

DATE OF SAMPLE			TEMP. (Degrees Centigrade)	DISSOLVED OXYGEN mg/l	pH	B.O.D. mg/l	C.O.D. mg/l	CHLORINE DEMAND		AMMONIA-NITROGEN mg/l	CHLORIDES mg/l	ALKALINITY mg/l	HARDNESS mg/l	COLOR (scale units)	TURBIDITY (scale units)	SULFATES mg/l	PHOSPHATES mg/l	TOTAL DISSOLVED SOLIDS mg/l	COLIFORMS per 100 ml.
MONTH	DAY	YEAR						1-HOUR mg/l	24-HOUR mg/l										
7	10	61	24.4	8.0	8.5	-	-	1.0	-	-	20	120	150	-	110	138	-	283	-
7	17	61	24.8	7.8	8.3	-	-	-	-	-	2	130	213	-	1800	169	-	-	-
7	24	61	24.8	7.7	8.6	-	-	2.2	-	-	2	144	217	-	700	213	-	480	-
7	31	61	22.8	6.2	8.4	-	-	-	-	-	-	154	206	-	2600	219	-	555	-
8	7	61	25.4	7.0	8.6	-	-	1.2	-	-	-	166	246	-	280	342	-	600	-
8	14	61	24.6	6.5	8.5	-	-	1.9	4.2	-	-	184	292	-	120	275	-	718	-
8	21	61	23.9	8.3	8.5	-	-	2.2	6.9	-	-	176	278	-	130	-	-	729	-
8	28	61	24.4	8.0	8.6	-	-	2.3	6.8	-	20	168	254	-	110	330	-	707	-
9	5	61	17.1	-	8.5	-	-	2.1	7.1	-	26	178	286	-	800	344	-	818	-
9	11	61	13.5	9.5	8.3	-	-	2.6	6.4	-	20	170	296	-	1040	326	-	712	-
9	18	61	16.2	8.0	8.1	-	-	-	-	-	30	160	276	-	11000	315	-	678	-
9	25	61	10.2	9.5	7.9	-	-	-	-	-	44	130	228	-	22000	316	-	600	-

STREAM FLOW DATA - 1960-1961

Thousand Cubic Feet per Second

PROVISIONAL--SUBJECT TO REVISION

Gaging Station near Sidney, Montana
Operated by U.S. Geological Survey

STATE	Montana
MAJOR BASIN	Missouri River
MINOR BASIN	Yellowstone River
STATION LOCATION	Yellowstone River near Sidney, Montana

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	4.150	4.610	4.000	4.200	2.900	5.500	3.910	2.770	29.800	9.010	4.810	1.130
2	4.130	4.640	2.800	4.400	2.900	5.600	3.840	2.670	30.400	8.340	2.960	1.220
3	4.090	4.660	2.400	4.600	3.000	5.600	3.760	2.480	28.600	7.680	2.610	1.400
4	4.000	4.730	2.200	4.800	3.400	5.500	3.690	2.360	24.900	7.150	2.320	1.590
5	3.910	4.730	2.200	4.700	3.800	5.400	3.710	2.250	23.800	6.570	2.090	2.160
6	3.890	4.730	2.400	4.600	4.400	5.300	3.520	2.160	23.700	5.990	1.880	2.120
7	3.870	4.950	3.200	4.500	4.700	5.300	3.460	1.840	24.100	5.410	1.600	2.690
8	3.820	5.050	4.000	4.300	5.000	5.200	3.420	1.700	26.000	5.070	1.330	2.990
9	3.690	5.000	3.400	4.200	5.200	5.200	3.350	1.590	26.000	4.970	1.200	3.130
10	3.630	4.850	3.000	4.200	5.400	5.200	3.350	1.560	25.900	5.710	.948	3.170
11	3.630	4.930	2.800	4.400	5.600	5.300	3.540	1.570	26.800	6.100	.822	4.830
12	3.630	5.050	2.700	5.000	5.700	5.400	3.540	1.510	28.100	6.950	.717	7.230
13	3.840	4.850	2.600	4.900	5.600	5.400	3.150	1.330	29.100	6.100	.810	10.400
14	4.880	4.970	2.700	4.800	5.500	5.500	2.940	1.110	29.100	5.460	1.270	10.200
15	6.150	4.970	2.800	4.600	5.400	5.600	2.780	1.010	27.900	5.140	2.070	11.000
16	5.860	5.050	3.000	4.500	5.300	5.800	2.630	.810	25.400	5.410	2.410	10.800
17	5.310	5.120	3.200	4.700	5.200	6.800	2.360	.570	23.100	5.290	2.250	9.800
18	4.850	5.020	3.500	5.000	5.100	7.000	2.030	1.440	21.100	4.850	2.070	8.720
19	4.730	4.950	3.700	5.000	5.000	6.400	2.460	2.580	19.600	4.540	1.720	8.080
20	4.880	4.880	3.400	4.800	4.900	5.500	2.580	3.930	19.500	4.110	1.430	8.340
21	5.260	4.850	3.200	4.700	4.800	4.640	2.410	5.780	19.200	3.540	1.270	8.720
22	5.120	4.850	3.000	4.500	5.100	4.540	2.100	5.480	18.200	3.070	1.250	13.000
23	5.120	4.780	2.800	4.300	5.200	4.360	1.880	5.410	17.700	2.940	1.200	16.800
24	5.170	4.660	2.600	4.000	5.100	4.150	1.860	6.280	16.500	2.980	1.170	14.900
25	5.240	4.690	2.600	3.900	4.800	4.060	1.860	6.680	15.200	2.900	1.140	12.600
26	5.050	4.410	2.700	3.700	4.800	3.930	1.700	8.860	13.800	2.880	1.110	11.500
27	4.970	4.400	2.800	3.600	5.000	3.840	1.510	12.200	12.300	2.750	1.080	10.400
28	4.810	4.400	2.900	3.400	5.200	3.820	2.180	16.300	11.100	2.500	1.010	9.800
29	4.730	4.400	3.000	3.200		3.820	2.580	19.600	10.300	2.230	.987	9.190
30	4.730	4.400	3.400	3.000		3.840	2.540	23.500	13.800	2.180	1.040	8.770
31	4.690		3.800	3.000		3.820		28.100		6.190	1.100	

Strontium 90

Strontium 90

Strontium 90 Activity, $\mu\mu c$/liter—1960–1961

Sampling Point	October–December	January–March	April–June	July–September
ALLEGHENY RIVER				
at Pittsburgh, Pa.	—	—	.2	.3
ANIMAS RIVER				
at Cedar Hill, N. Mex.	—	—	—	.3
APALACHICOLA RIVER				
at Chattahoochee, Fla.	—	—	—	.4
ARKANSAS RIVER				
at Pendleton Ferry, Ark.	—	—	—	—
near Ponca City, Okla.	—	—	.7	—
at Coolidge, Kans.	—	—	—	2.3
BIG SIOUX RIVER				
below Sioux Falls, S. Dak.	—	—	—	.4
CHATTAHOOCHEE RIVER				
at Columbus, Ga.	—	.3	—	—
at Atlanta, Ga.	.3	—	.3	—
COLORADO RIVER				
at Yuma, Ariz.	—	1.2	—	—
above Parker Dam, Ariz-Calif.	1.2	—	—	—
near Boulder City, Nev.	—	—	—	1.0
at Page, Ariz.	.4	—	2.3	—
at Loma, Colo.	—	.4	—	—
COLUMBIA RIVER				
at Clatskanie, Oreg.	—	—	1.1	—
at Bonneville, Oreg.	.5	—	—	.6
at McNary Dam, Oreg.	—	—	—	1.2
at Pasco, Wash.	—	1.0	—	1.1
at Wenatchee, Wash.	—	.7	—	—

Sampling Point	October–December	January–March	April–June	July–September
CONNECTICUT RIVER				
below Northfield, Mass.	—	—	—	.4
CUMBERLAND RIVER				
at Clarksville, Tenn.	—	—	—	.4
DELAWARE RIVER				
at Philadelphia, Pa.	—	.6	—	—
at Martins Creek, Pa.	—	—	.4	—
ESCAMBIA RIVER				
at Century, Fla.	—	—	—	.9
GREAT LAKES				
Lake Erie at Buffalo, N.Y.	—	.6	—	—
Lake Huron, Detroit River at Detroit, Mich.	—	—	—	.6
Lake Huron, St. Clair River at Port Huron, Mich.	—	—	—	.4
Lake Michigan at Gary, Ind.	—	—	—	.2
Lake Michigan at Milwaukee, Wis.	.2	—	.3	—
Lake Superior, St. Mary's River at Sault Ste. Marie, Mich.	—	—	—	—
Lake Superior at Duluth, Minn.	—	.4	—	—
HUDSON RIVER				
below Poughkeepsie, N.Y.	.4	.4	.5	.2
ILLINOIS RIVER				
at Peoria, Ill.	.5	—	—	.4
KANAWHA RIVER				
at Winfield Dam, W. Va.	—	.2	—	—

Dash (—) indicates no determination made.

665709 O—62——35

Strontium 90—Continued

Strontium 90 Activity, $\mu\mu c$/liter—1960–1961

Sampling Point	October–December	January–March	April–June	July–September
KLAMATH RIVER				
at Keno, Oreg.	—	—	.3	—
LITTLE MIAMI RIVER				
at Cincinnati, Ohio	—	1.1	—	1.1
MERRIMACK RIVER				
above Lowell, Mass.	—	—	—	.7
MISSISSIPPI RIVER				
at New Orleans, La.	—	—	—	—
at Vicksburg, Miss	—	—	—	—
at Delta, La.	—	—	.6	.4
at West Memphis, Ark.	1.0	—	—	—
at Cape Girardeau, Mo.	—	.7	—	.8
at East St. Louis, Ill.	—	—	.5	—
at Burlington, Iowa	—	—	—	.6
at Dubuque, Iowa	—	—	—	—
at Lock & Dam No. 3 below St. Paul, Minn.	—	—	—	.9
MISSOURI RIVER				
at St. Louis, Mo.	—	1.1	—	1.4
at Kansas City, Kans.	1.4	—	—	—
at St. Joseph, Mo.	.5	—	—	—
at Omaha, Nebr.	—	—	.7	—
at Yankton, S. Dak.	—	—	—	.6
at Bismarck, N. Dak.	—	—	.6	—
at Williston, N. Dak.	—	.8	—	—
MONONGAHELA RIVER				
at Pittsburgh, Pa.	—	—	—	.4
NORTH PLATTE RIVER				
above Henry, Nebr.	—	—	—	—

Sampling Point	October–December	January–March	April–June	July–September
OHIO RIVER				
at Cairo, Ill.	—	—	—	1.1
at Evansville, Ind.	.8	—	—	—
at Louisville, Ky.	—	—	—	.4
at Cincinnati, Ohio	—	.3	—	—
at Huntington, W. Va.	.4	—	—	—
at East Liverpool, Ohio	—	—	—	.4
OUACHITA RIVER				
at Bastrop, La.	—	—	—	—
PLATTE RIVER				
above Plattsmouth, Nebr.	—	—	—	—
POTOMAC RIVER				
at Great Falls, Md.	—	1.3	—	—
at Williamsport, Md.	—	—	.8	—
RAINY RIVER				
at Baudette, Minn.	—	—	—	—
RED RIVER (North)				
at Grand Forks, N. Dak.	—	—	1.5	—
RED RIVER (South)				
at Alexandria, La.	—	—	—	1.0
at Index, Ark.	—	.4	—	—
at Denison, Tex.	.7	—	—	—
RIO GRANDE				
at Brownsville, Tex.	—	—	.3	—
at Laredo, Tex.	—	.4	—	—
at El Paso, Tex.	—	.4	—	—
below Alamosa, Colo.	—	—	—	.4

Strontium 90—Continued

Strontium 90 Activity, $\mu\mu c$/liter—1960–1961

Sampling Point	October–December	January–March	April–June	July–September
ROANOKE RIVER				
at John H. Kerr Dam and Reservoir, Va.	—	—	—	—
SABINE RIVER				
near Ruliff, Tex.	—	—	.8	—
ST. LAWRENCE RIVER				
at Massena, N.Y.	.6	—	—	—
SAN JUAN RIVER				
at Shiprock, N. Mex.	—	—	—	—
SAVANNAH RIVER				
at Port Wentworth, Ga.	.5	.4	.5	.4
at North Augusta, S.C.	—	—	.5	—
SCHUYLKILL RIVER				
at Philadelphia, Pa.	—	—	—	—
SHENANDOAH RIVER				
at Berryville, Va.	—	—	—	—
SNAKE RIVER				
at Wawawai, Wash.	—	—	—	.3
at Weiser, Idaho	.2	—	—	—
SOUTH PLATTE RIVER				
at Julesburg, Colo.	—	—	—	.7
SUSQUEHANNA RIVER				
at Conowingo, Md.	.4	—	—	.3
at Sayre, Pa.	—	—	—	.3
TENNESSEE RIVER				
at Bridgeport, Ala.	—	1.5	.9	.7
at Chattanooga, Tenn.	.9	.8	—	.6
TOMBIGBEE RIVER				
below Columbus, Miss.	—	—	—	—
TRUCKEE RIVER				
at Farad Calif. below Calif-Nev. border	—	—	—	—
YAKIMA RIVER				
at Richland, Wash.	—	—	—	.4
YELLOWSTONE RIVER				
near Sidney, Mont.	—	—	.8	—

TRACE ELEMENTS

NATIONAL WATER QUALITY NETWORK

1960 - 1961

CONCENTRATION — MILLIGRAMS PER LITER

STATION	DATE FROM	DATE TO	B	F	K	Na	Se	Cd	Ba	Be
			Analysis by wet or flame method					*Analysis by spectrophotographic method*		
ALLEGHENY RIVER at Pittsburgh, Pennsylvania	3-1-61	6-20-61	0.03	0.13	1.6	6.0	.01*	.003*	.04	.00006*
	7-10-61	10-15-61	0.09	0.45	3.9	25.5	.01*	.009*	.06	.0001*
ANIMAS RIVER at Cedar Hill, N. Mexico	3-1-61	6-20-61	0.10	0.42	3.7	28.0	.01	.01*	.08	.0002*
	7-10-61	10-15-61	0.08	0.45	3.7	19.0	.01*	.008*	.05	.0001*
APALACHICOLA RIVER at Chattahoochee, Florida	3-1-61	6-20-61	0.04	0.18	1.3	2.8		.002*	.02	.00003*
	7-10-61	10-15-61						.001*	.03	.00002*
ARKANSAS RIVER at Pendleton Ferry, Ark.	3-1-61	6-20-61	0.04	0.39	2.3	41.0	.01*	.008*	.08	.0001*
	7-10-61	10-15-61	0.10	0.20	4.2	34.0	.01*	.008*	.08	.0001*
near Ponca City, Oklahoma	3-1-61	6-20-61	0.13	0.43	4.6	100.0	.01*	.02*	.2	.0004
	7-10-61	10-15-61	0.09	0.35	6.3	90.0	.01*	.02*	.2	.0003*
at Coolidge, Kansas	3-1-61	6-20-61	0.40	0.51	8.3	440.0	.01*	.100*	.2	.002*
	7-10-61	10-15-61	0.63	0.54	11.3	350.0	.01*	.1*	.07*	.002*
BIG SIOUX RIVER below Sioux Falls, S. Dak.	7-10-61	10-15-61	0.17	0.50	13.8	106.0	.01*	.02*	.02	.0004*
CHATTAHOOCHEE RIVER at Columbus, Georgia	3-1-61	6-20-61	0.03	0.10	1.6	2.8	.01*	.001*	.01	.00002*
	7-10-61	10-15-61	0.06	0.16	2.7	5.0	.01*	.001*	.01	.00002*
at Atlanta, Georgia	3-1-61	6-20-61	0.03	0.24	1.3	2.2	.01*	.002*	.003	.00003*
	7-10-61	10-15-61	0.03	0.16	2.5	3.2	.01*	.03*	.02*	.0005*
COLORADO RIVER at Yuma, Arizona	3-1-61	6-20-61	0.04	0.33	6.9	345.0	.01*	.006*	.004*	.0001*
	7-10-61	10-15-61	0.59	0.54	10.0	469.0	.01*	.08*	.05*	.001*
above Parker Dam, Arizona-California	3-1-61	6-20-61	0.10	0.45	4.8	72.0	.01*	.02*	.3	.0003*
	7-10-61	10-15-61	0.15	0.45	6.3	96.0	.01*	.02*	.1	.0003*
near Boulder City, Nevada	3-1-61	6-20-61	0.17	0.34	4.4	85.0	.01*	.02*	.1	.0003*
	7-10-61	10-15-61	0.14	0.35	5.5	75.0	.01*	.02*	.07	.0003*
at Page, Arizona	3-1-61	6-20-61	0.10	0.45	5.5	120.0	.01*	.03*	.09	.0004*
	7-10-61	10-15-61	0.17	0.60	10.3	112.0	.01*	.03*	.09	.0006*
at Loma, Colorado	3-1-61	6-20-61	0.10	0.43	5.0	115.0	.01*	.03*	.09	.0005*
	7-10-61	10-15-61	0.14	0.50	6.5	89.0	.01*	.03*	.02*	.0005*
COLUMBIA RIVER at Bonneville, Oregon	3-1-61	6-20-61	0.06	0.18	1.6	5.0	.01*	.003*	.02	.00004*
	7-10-61	10-15-61	0.05	0.30	3.3	8.5	.01*	.003*	.02	.00006*
at Clatskanie, Oregon	3-1-61	6-20-61	0.03	0.24	1.3	5.0	.01*	.001*	.01	.00002*
	7-10-61	10-15-61	0.05	0.30	3.0	6.0	.01*	.003*	.02	.00004*
at McNary Dam, Oregon	3-1-61	6-20-61	0.04	0.24	1.3	4.0	.01*	.002*	.03	.00003*
	7-10-61	10-15-61	0.06	0.20	3.0	7.0	.01*	.002*	.03	.00004*
at Pasco, Washington	3-1-61	6-20-61	0.10	0.16	1.3	2.8	.01*	.002*	.04	.00004*
	7-10-61	10-15-61	0.03	0.10	2.3	2.8	.01*	.002*	.02	.00004*
at Wenatchee, Washington	3-1-61	6-20-61	0.09	0.52	1.3	2.3	.01*	.002*	.05	.00004*
	7-10-61	10-15-61	0.03	0.10	2.2	2.3	.01*	.002*	.03	.00003*

STATION	DATE FROM	DATE TO	Pb	Cr	Sn	Sb	Mn	Fe	Ni	Bi	Mo	V	Cu	Zn	Co
ALLEGHENY RIVER at Pittsburgh, Pennsylvania	3-1-61	6-20-61	.006*	.001*	.002*	.01*	.1	.20	.003	.006*	.003	.005	.003	.6*	.002*
	7-10-61	10-15-61	.01*	.003*	.006*	.03*	.01	.01	.09	.01*	.006*	.006*	.001	1.0*	.006*
ANIMAS RIVER at Cedar Hill, N. Mexico	3-1-61	6-20-61	.02*	.004*	.008*	.04*	.02*	.20	.008*	.02*	.008*	.02	.004	2.0*	.008*
	7-10-61	10-15-61	.01*	.003*	.005*	.03*	.01*	.01	.005*	.01*	.008	.05	.002	1.0*	.005*
APALACHICOLA RIVER at Chattahoochee, Florida	3-1-61	6-20-61	.003*	.0006*	.005	.006*	.002*	.02	.005	.003*	.001*	.001*	.003	.3*	.001*
	7-10-61	10-15-61	.004	.002	.001	.005*	.002	.02	.01	.002*	.004	.001*	.02	.2*	.001*
ARKANSAS RIVER at Pendleton Ferry, Ark.	3-1-61	6-20-61	.01*	.003*	.006*	.03*	.01*	.08	.005	.01*	.005*	.005*	.008	1.0*	.005*
	7-10-61	10-15-61	.01*	.003*	.005*	.03*	.01*	.03	.008	.01*	.008	.005*	.008	1.0*	.005*
near Ponca City, Oklahoma	3-1-61	6-20-61	.04*	.008*	.02*	.08*	.03*	.03*	.02*	.04*	.02*	.02*	.002*	4.0*	.02*
	7-10-61	10-15-61	.03*	.005*	.01*	.05*	.02*	.05	.01*	.03*	.01	.01*	.004	3.0*	.01*
at Coolidge, Kansas	3-1-61	6-20-61	.2*	.04*	.08*	.4*	.2*	.08*	.08*	.2*	.08*	.08*	.01*	20.0*	.08*
	7-10-61	10-15-61	.2*	.03*	.07*	.3*	.1*	.1	.07*	.2*	.07*	.07*	.01*	20.0*	.07*
BIG SIOUX RIVER below Sioux Falls, S. Dak.	7-10-61	10-15-61	.04*	.008*	.02*	.08*	.03*	.04	.02*	.04*	.02*	.02*	.002*	4.0*	.02*
CHATTAHOOCHEE RIVER at Columbus, Georgia	3-1-61	6-20-61	.002*	.0005*	.001*	.005*	.002*	.01	.02	.002*	.001*	.001*	.01	.2*	.001*
	7-10-61	10-15-61	.002*	.002	.001*	.005*	.002*	.005	.001	.002*	.001	.001*	.02	.2*	.001*
at Atlanta, Georgia	3-1-61	6-20-61	.003*	.0006*	.001	.006*	.002*	.001*	.001*	.003*	.001*	.001*	.0002*	.3*	.001*
	7-10-61	10-15-61	.05*	.01*	.02*	.1*	.04*	.002	.02	.05*	.08	.04	.007	5.0*	.02*
COLORADO RIVER at Yuma, Arizona	3-1-61	6-20-61	.01*	.002*	.004*	.02*	.008*	.004*	.004*	.01*	.008	.004*	.0008	1.0*	.004*
	7-10-61	10-15-61	.1*	.03*	.05*	.3*	.1*		.05*	.1*	.05*	.05*	.008*	10.0*	.05*
above Parker Dam, Arizona-California	3-1-61	6-20-61	.03*	.006*	.01*	.06*	.03*	.01	.01*	.03*	.03	.01*	.03	3.0*	.01*
	7-10-61	10-15-61	.03*	.007*	.01*	.07*	.03*	.02	.01*	.03*	.03	.01*	.03	3.0*	.01*
near Boulder City, Nevada	3-1-61	6-20-61	.03*	.007*	.01*	.07*	.03*	.02	.01*	.03*	.03	.01*	.002*	3.0*	.01*
	7-10-61	10-15-61	.03*	.007*	.01*	.07*	.03*	.05	.01*	.03*	.03	.01*	.002*	3.0*	.01*
at Page, Arizona	3-1-61	6-20-61	.04*	.009*	.02*	.09*	.04*	.04	.02*	.04*	.04	.02*	.003	4.0*	.02*
	7-10-61	10-15-61	.06*	.01*	.02*	.1*	.05*	.3	.02*	.06*	.05*	.02*	.006*	6.0*	.03*
at Loma, Colorado	3-1-61	6-20-61	.05*	.009*	.02*	.09*	.04*	.02	.02*	.05*	.07	.02	.003*	4.0*	.02*
	7-10-61	10-15-61	.05*	.01*	.02*	.1*	.04*	.2	.02	.05*	.08	.3	.007	5.0*	.02*
COLUMBIA RIVER at Bonneville, Oregon	3-1-61	6-20-61	.004	.003	.002*	.009*	.003*	.007	.002	.004*	.002*	.002*	.002	.4*	.002*
	7-10-61	10-15-61	.03	.004	.002*	.01*	.004*	.01	.002	.006*	.002	.002*	.002	.6*	.002*
at Clatskanie, Oregon	3-1-61	6-20-61	.002*	.003	.002	.005*	.002*	.02	.001*	.002*	.001	.001*	.002	.2*	.001*
	7-10-61	10-15-61	.004*	.004	.002*	.009*	.004*	.02	.002	.004*	.004	.002*	.003	.4*	.002*
at McNary Dam, Oregon	3-1-61	6-20-61	.003*	.003	.001*	.007*	.003*	.003	.006	.003*	.002	.001*	.003	.3*	.001*
	7-10-61	10-15-61	.004*	.005	.002*	.008*	.003	.02	.002	.004*	.004	.002*	.006	.4*	.002*
at Pasco, Washington	3-1-61	6-20-61	.004*	.006	.001*	.007*	.003*	.003	.001*	.004*	.001	.001*	.003	.4*	.001*
	7-10-61	10-15-61	.004*	.007	.002*	.008*	.003*	.02	.002*	.004	.002*	.002	.002	.4*	.002*
at Wenatchee, Washington	3-1-61	6-20-61	.004*	.0008	.002*	.008*	.003*	.005	.002	.004*	.002	.002*	.002	.4*	.002*
	7-10-61	10-15-61	.003*	.001	.001*	.007*	.003*	.02	.002	.003*	.002	.001*	.003	.3*	.001*

* ACTUAL VALUE IS LESS THAN THE AMOUNT SHOWN. REPORTED RESULT INDICATES LIMIT OF SENSITIVITY AT WHICH TEST WAS PERFORMED. SEE TEXT FOR EXPLANATION.

TRACE ELEMENTS

NATIONAL WATER QUALITY NETWORK

1960 - 1961

STATION	DATE FROM	DATE TO	B	F	K	Na	Se	Cd	Ba	Be	Pb	Cr	Sn	Sb	Mn	Fe	Ni	Bi	Mo	V	Cu	Zn	Co
			CONCENTRATION — MILLIGRAMS PER LITER																				
			ANALYSIS BY WET OR FLAME METHOD					ANALYSIS BY SPECTROPHOTOGRAPHIC METHOD															
CONNECTICUT RIVER																							
below Northfield, Mass.	3-1-61	6-20-61	0.01	0.13	1.2	2.8		.004*	.01	.00006	.006*	.001*	.003*	.01*	.005*	.03	.004	.006*	.003*	.003*	.004	.6*	.003*
	7-10-61	10-15-61	0.05	0.10	3.3	11.0	.01*	.002*	.02	.00004*	.004*	.005	.002*	.008*	.003*	.02	.002	.004*	.002	.002*	.005	.4*	.002*
DELAWARE RIVER																							
at Philadelphia, Pa.	3-1-61	6-20-61	0.05	0.18	1.6	4.0	.01*	.002*	.04	.00003*	.003*	.001	.002	.005*	.003	.04	.001*	.003*	.003	.002	.05	.3*	.001*
	7-10-61	10-15-61	0.05	0.20	4.2	8.5	.01*	.004*	.03	.00007*	.007*	.001*	.003*	.01*	.006*	.01	.003*	.007*	.004	.003*	.1	.7*	.003*
at Martins Creek, Pa.	3-1-61	6-20-61	0.06	0.05	1.2	1.9	.01*	.001	.01	.00001*	.005	.0002	.0005*	.002*	.01	.007	.02	.001*	.0007	.0005	.02	.1*	.0007
	7-10-61	10-15-61	0.03	0.05	2.5	2.8	.01*	.003	.01	.00002*	.01	.001	.0007*	.003*	.03	.01	.04	.002*	.001	.0007*	.08	.2*	.0007*
ESCAMBIA RIVER																							
at Century, Florida	3-1-61	6-20-61	0.04	0.13	1.2	2.3		.002*	.02	.00003*	.003*	.001	.001*	.007*	.003*	.4	.005	.003*	.001*	.001*	.006	.3*	.001*
GREAT LAKES																							
Lake Superior at Duluth, Minnesota	3-1-61	6-20-61	0.02	0.00	1.0	0.9	.01*	.002*	.004	.00003*	.003*	.0006*	.001*	.006*	.003*	.006	.002	.003*	.001*	.001*	.002	.3*	.001*
	7-10-61	10-15-61	0.05	0.10	2.3	1.6	.01*	.003*	.02	.00004*	.004*	.003	.002*	.008*	.003*	.008	.003	.004*	.002*	.002*	.003	.4*	.002*
St. Mary's River at Sault Ste. Marie, Mich.	3-1-61	6-20-61	0.05	0.24	1.0	0.9	.01*	.002*	.01	.00003	.003*	.0006*	.001*	.006*	.003*	.03	.003	.003*	.001*	.001*	.01	.3*	.001*
	7-10-61	10-15-61	0.02	0.06	2.2	1.6	.01*	.002*	.006	.00003*	.003*	.002	.001*	.006*	.002*	.01	.001*	.003*	.001*	.001*	.003	.3*	.001*
Lake Michigan at Gary, Indiana	3-1-61	6-20-61	0.06	0.13	1.3	3.2	.01*	.005*	.01	.00008*	.008*	.002*	.003*	.02*	.007*	.05	.003*	.008*	.005	.003*	.005	.8*	.003*
	7-10-61	10-15-61	0.05	0.20	3.0	9.5	.01*	.004*	.008	.00007*	.007*	.001*	.003*	.01*	.006*	.03	.003	.007*	.004	.003*	.004	.7*	.003*
St. Clair River at Port Huron, Michigan	3-1-61	6-20-61	0.03	0.13	1.2	2.7	.01*	.004*	.03	.00006*	.006*	.001*	.003*	.01*	.005*	.005	.003*	.006*	.003*	.003*	.001	.6*	.003*
	7-10-61	10-15-61	0.05	0.06	2.5	3.6	.01*	.003*	.01	.00005*	.005*	.004*	.002*	.01*	.004*	.004	.003*	.005*	.002	.002*	.003	.5*	.002*
Lake Michigan at Milwaukee, Wisconsin	3-1-61	6-20-61	0.06	0.24	1.6	3.2	.01*	.005*	.02	.00008*	.008*	.002*	.003*	.02*	.006*	.003	.005	.008*	.005	.003*	.006	.8*	.003*
	7-10-61	10-15-61	0.05	0.20	2.7	4.0	.01*	.004*	.009	.00006*	.006*	.001*	.003*	.01*	.005*	.006	.003	.006*	.004	.003*	.005	.6*	.003*
Detroit River at Detroit, Michigan	3-1-61	6-20-61	0.06	0.10	1.2	3.3		.003*	.03	.00005*	.005*	.002	.002	.009*	.004*	.009	.002*	.005*	.002*	.002*	.005	.5*	.002*
	7-10-61	10-15-61	0.05	0.17	2.5	4.0	.01*	.003*	.009	.00005*	.005*	.0009*	.002*	.009*	.004*	.009	.002	.005*	.003	.002*	.008	.5*	.002*
Lake Erie at Buffalo, New York	3-1-61	6-20-61	0.04	0.05	1.6	6.0	.01*	.006*	.004	.0001*	.01*	.002*	.004*	.02*	.008*	.004	.004*	.01*	.004	.004*	.001	1.0*	.004*
	7-10-61	10-15-61	0.03	0.17	3.0	9.0	.01*	.006*	.02	.0001*	.01*	.002*	.004*	.02*	.008*	.01	.008	.01*	.006	.004*	.04	1.0*	.004*
St. Lawrence River at at Massena, New York	3-1-61	6-20-61	0.04	0.43	2.5	13.0	.01*	.008*	.03	.0001*	.01*	.003*	.005*	.03*	.01*	.03	.008	.01*	.008	.005*	.008	1.0*	.005*
	7-10-61	10-15-61	0.01	0.30	1.8	11.0	.01*	.004*	.03	.00007*	.007*	.004	.003*	.01*	.006*	.006	.003*	.003*	.004	.003*	.006	.7*	.002*
HUDSON RIVER																							
below Poughkeepsie, New York	3-1-61	6-20-61	0.03	0.00	1.9	4.0	.01*	.002*	.03	.00003*	.003*	.004	.001*	.006*	.003*	.04	.004	.003*	.002	.001*	.004	.3*	.001*
	7-10-61	10-15-61	0.03	0.18	1.9	7.5	.01*	.005*	.02	.00009*	.009*	.007	.004*	.02*	.007*	.02	.004*	.009*	.005	.004*	.005	.9*	.004*
ILLINOIS RIVER																							
at Peoria, Illinois	3-1-61	6-20-61	0.04	0.41	3.2	16.0	.01*	.01*	.03	.0002*	.02*	.003*	.006*	.03*	.01*	.03	.02	.02*	.01	.006*	.02	2.0*	.006*
	7-10-61	10-15-61	0.23	0.67	4.8	19.0	.01*	.01*	.03	.0002*	.02*	.004*	.01	.04*	.02*	.02	.01	.02*	.02	.008*	.03	.2*	.008*
KANAWHA RIVER																							
at Winfield Dam, W. Va.	3-1-61	6-20-61	0.12	0.10	1.9	5.0	.01*	.002*	.3	.00004*	.004*	.0008*	.002*	.008*	.003*	.008	.004	.004*	.002*	.002*	.002	.4*	.002*
	7-10-61	10-15-61	0.04	0.18	2.8	21.0	.01*	.009*	.6	.0001*	.01*	.003*	.006*	.03*	.01*	.009	.006*	.01*	.006*	.006*	.0009	1.0*	.006*
KLAMATH RIVER																							
at Keno, Oregon	3-1-61	6-20-61	0.09	0.24	3.4	16.0	.01*	.006*	.01	.0001*	.01*	.008	.006	.02*	.008*	.006	.004*	.01*	.004	.017*	.0006*	1.0*	.004*
	7-10-61	10-15-61	0.09	0.18	3.3	12.0	.01*	.004*	.008	.00007*	.007*	.001*	.003*	.01*	.005*	.007	.003	.007*	.004	.03	.005	.7*	.003*

* ACTUAL VALUE IS LESS THAN THE AMOUNT SHOWN REPORTED RESULT INDICATES LIMIT OF SENSITIVITY AT WHICH TEST WAS PERFORMED SEE TEXT FOR EXPLANATION.

TRACE ELEMENTS

NATIONAL WATER QUALITY NETWORK

1960 - 1961

STATION	DATE		CONCENTRATION —— MILLIGRAMS PER LITER																				
	FROM	TO	ANALYSIS BY WET OR FLAME METHOD					ANALYSIS BY SPECTROPHOTOGRAPHIC METHOD															
			B	F	K	Na	Se	Cd	Ba	Be	Pb	Cr	Sn	Sb	Mn	Fe	Ni	Bi	Mo	V	Cu	Zn	Co
LITTLE MIAMI RIVER																							
at Cincinnati, Ohio	3-1-61	6-20-61	0.17	0.39	2.2	7.5	.01*	.008*	.02	.0001*	.01*	.003*	.005*	.03*	.01*	.1	.005*	.01*	.005*	.005*	.0008*	1.0*	.005*
	7-10-61	10-15-61	0.12	0.24	3.8	10.5	.01*	.006*	.04	.0001*	.01*	.002*	.004*	.02*	.009*	.009	.009	.01*	.01	.004*	.006	1.0*	.004*
MERRIMACK RIVER																							
above Lowell, Mass.	7-10-61	10-15-61	0.08	0.18	2.2	8.5	.01*																
MISSISSIPPI RIVER																							
at New Orleans, Louisiana	3-1-61	6-20-61	0.11	0.18	2.7	10.0	.01*	.004*	.07	.00007*	.007*	.001*	.003*	.01*	.006*	.01	.003*	.007*	.004	.003*	.001	.7*	.003*
	7-10-61	10-15-61	0.12	0.18	3.9	16.0	.01*	.009*	.06	.0002*	.02*	.003*	.006*	.03*	.01*	.03	.01	.02*	.009	.006*	.03	2.0*	.006*
at Delta, Louisiana	3-1-61	6-20-61	0.03	0.33	3.0	9.5	.01*	.004*	.07	.00007*	.007*	.001*	.003*	.01*	.005*	.03	.003*	.007*	.004	.005*	.003	.7*	.003*
	7-10-61	10-15-61	.06	0.30	4.2	19.5	.01*	.01*	.1	.0002*	.02*	.003*	.007*	.03*	.01*	.03	.007*	.02*	.007	.007*	.01	2.0*	.007*
at West Memphis, Arkansas	3-1-61	6-20-61	0.02	0.33	2.7	7.5	.01*	.004*	.05	.00007*	.007*	.001*	.003*	.01*	.005	.04	.003	.007	.003	.003*	.003	.7*	.003*
	7-10-61	10-15-61	0.11	0.26	4.2	11.5	.01*	.008*	.08	.0001*	.01*	.003*	.01	.03*	.01*	.05	.005	.01*	.01	.005*	.008	1.0*	.005*
at Cape Girardeau, Missouri	3-1-61	6-20-61	0.03	0.18	4.2	11.0	.01*	.006*	.1	.0001*	.01*	.002*	.004*	.02*	.008*	.008	.006	.01*	.006	.004*	.02	1.0*	.004*
	7-10-61	10-15-61	0.09	0.38	4.8	21.0	.01*	.008*	.08	.0001*	.01*	.003*	.008	.03*	.01*	.05	.005	.01*	.01	.005*	.01	1.0*	.005*
at East St. Louis, Illinois	3-1-61	6-20-61	0.06	0.29	3.7	9.0	.01*	.006*	.06	.0001*	.01*	.002*	.004*	.02*	.008*	.04	.004*	.01*	.006	.004*	.0006	1.0*	.004*
	7-10-61	10-15-61	0.11	0.36	4.5	15.0	.01*	.007*	.07	.0001*	.01*	.002*	.005*	.02*	.01*	.02	.005*	.01*	.007	.005*	.007	1.0*	.005*
at Burlington, Iowa	3-1-61	6-20-61	0.04	0.18	3.7	4.5	.01*	.005*	.05	.0008*	.008*	.002*	.003	.02*	.006*	.03	.003	.008*	.003	.003*	.1	.8*	.003*
	7-10-61	10-15-61	0.07	0.10	3.8	6.5	.01*	.007*	.07	.0001*	.01*	.002*	.005*	.02*	.1	1.1	.01	.01*	.007	.005*	.42	1.0*	.005*
at Dubuque, Iowa	3-1-61	6-20-61	0.06	0.13	3.0	2.8		.004*	.04	.00007*	.007*	.003	.003*	.01*	.005*	.009	.004	.007*	.003*	.003*	.007	.7*	.003*
	7-10-61	10-15-61	0.10	0.18	3.0	6.5	.01*	.006*	.04	.0001*	.01*	.002*	.004*	.02*	.007*	.09	.004*	.01*	.006	.004*	.007	1.0*	.004*
below St. Paul, Minnesota	3-1-61	6-20-61	0.01	0.24	3.0	10.0	.01*	.008*	.05	.0001*	.01	.003	.005*	.03*	.05	.08	.005	.01*	.005*	.005*	.008	1.0*	.005*
	7-10-61	10-15-61	0.12	0.18	3.3	11.5	.01*	.007*	.1	.0001*	.01*	.005*	.005*	.02*	.01*	.02	.007	.01*	.007	.005*	.02	1.0*	.005*
MISSOURI RIVER																							
at St. Louis, Missouri	3-1-61	6-20-61	0.06	0.43	4.4	23.0	.014	.008*	.1	.0001*	.01*	.003*	.005*	.03*	.01*	.2	.005*	.01*	.008	.005*	.003	1.0*	.005*
	7-10-61	10-15-61	0.12	0.38	5.5	25.0	.01*	.01*	.2	.0002*	.02*	.003*	.006*	.03*	.01*	.1	.006*	.02*	.01	.006*	.01	2.0*	.006*
at Kansas City, Kansas	3-1-61	6-20-61	0.06	0.58	6.0	23.0	.01*	.007*	.07	.0001*	.01*	.002*	.004*	.02*	.009*	.04	.004*	.01*	.009	.004*	.007	1.0*	.004*
	7-10-61	10-15-61	0.15	0.51	6.0	35.0	.01*	.01*	.1	.0002*	.02*	.004*	.007*	.04*	.01*	.1	.007*	.02*	.01	.007*	.01	2.0*	.007*
at St. Joseph, Missouri	3-1-61	6-20-61	0.10	0.50	6.7	28.0	.01*	.01*	.01	.0002*	.02	.003*	.007*	.03*	.01*	.2	.007*	.02*	.01	.007*	.03	2.0*	.007*
	7-10-61	10-15-61	0.18	0.55	5.8	51.5	.01*	.01*	.1	.0002*	.02*	.005*	.01*	.05*	.02*	.05	.01*	.02*	.01	.01*	.01	2.0*	.01*
at Omaha, Nebraska	3-1-61	6-20-61	0.14	0.53	6.5	28.0	.01*	.01*	.03	.0002*	.02*	.007*	.007*	.03*	.01*	.1	.007*	.02*	.007	.007*	.01	2.0*	.007*
	7-10-61	10-15-61	0.18	0.60	5.5	59.5	.01*	.02*	.2	.0003*	.03*	.005*	.01*	.05*	.02*	.02	.01*	.03*	.01*	.01*	.005	3.0*	.01*
at Yankton, South Dakota	3-1-61	6-20-61	0.10	0.70	5.2	48.0	.01*	.01*	.03	.0002*	.02*	.004*	.008*	.04*	.02*	.008*	.008*	.02*	.008*	.008*	.2	2.0*	.008*
	7-10-61	10-15-61	0.18	0.50	5.5	60.5	.01*	.02*	.03	.0003*	.02*	.004*	.008*	.04*	.02*	.008*	.008*	.02*	.008*	.008*	.2	2.0*	.008*
at Bismarck, North Dakota	3-1-61	6-20-61	0.06	0.72	4.2	50.0	.01*	.01*	.04	.0002*	.02*	.004*	.008*	.04*	.02*	.008*	.008*	.02*	.008	.008	.2	2.0*	.008*
	7-10-61	10-15-61	0.17	0.60	4.6	52.5	.01*	.02*	.03	.0003*	.03*	.005*	.01*	.05*	.02*	.2	.01*	.03*	.01	.01*	.05	3.0*	.01*
at Williston, North Dakota	3-1-61	6-20-61	0.08	0.62	4.2	54.0	.01*	.01*	.04	.0002*	.02*	.004*	.009*	.04*	.02*	.02*	.009*	.02*	.009	.009*	.001*	2.0*	.009*
	7-10-61	10-15-61	0.18	0.80	4.5	59.5	.01*	.02*	.04	.0003*	.03*	.005*	.01*	.05*	.02*	.02	.01*	.03*	.01	.01*	.002	3.0*	.01*
MONONGAHELA RIVER																							
at Pittsburgh, Pennsylvania	7-10-61	6-20-61	0.10	0.53	3.7	25.0	.01*	.01*	.07	.0002*	.02*	.004*	.007*	.04*	.36	.01	.04	.02*	.007*	.007*	.004	2.0*	.007*
NORTH PLATTE RIVER																							
above Henry, Nebraska	7-10-61	10-15-61	0.17	0.46	6.3	60.5	.01*	.02*	.1	.0003*	.03*	.006*	.01*	.06*	.02*	.02	.01*	.03*	.02	.01*	.05	3.0*	.01*

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TRACE ELEMENTS

NATIONAL WATER QUALITY NETWORK

1960 - 1961

STATION	DATE		CONCENTRATION — MILLIGRAMS PER LITER																				
			ANALYSIS BY WET OR FLAME METHOD					ANALYSIS BY SPECTROPHOTOGRAPHIC METHOD															
	FROM	TO	B	F	K	Na	Se	Cd	Ba	Be	Pb	Cr	Sn	Sb	Mn	Fe	Ni	Bi	Mo	V	Cu	Zn	Co
OHIO RIVER																							
at Cairo, Illinois	3-1-61	6-20-61	0.07	0.43	2.4	7.5	.01*	.005*	.07	.00009*	.009*	.002*	.004*	.02*	.007*	.04	.004	.009*	.004*	.004*	.004	.9*	.004*
at Evansville, Indiana	3-1-61	6-20-61	0.04	0.39	2.2	7.0	.01*	.004*	.05	.00007*	.007*	.001*	.003*	.01*	.03	.1	.003	.007*	.003	.003*	.004	.7*	.003*
	7-10-61	10-15-61	0.09	0.30	3.7	13.5	.01*	.007*	.1	.0001*	.01*	.002*	.005*	.02*	.01*	.01	.005*	.01*	.007	.005*	.005	1.0*	.005*
at Louisville, Kentucky	7-10-61	10-15-61	0.06	0.28	3.7	15.0	.01*	.009*	.09	.0001*	.01*	.003*	.006*	.03*	.01*	.09	.009	.01*	.01	.006*	.009	1.0*	.006*
at Cincinnati, Ohio	3-1-61	6-20-61	0.06	0.24	2.2	7.0	.01*	.005*	.05	.00008*	.008*	.002*	.003*	.02*	.007*	.005	.003*	.008*	.003*	.003*	.007	.8*	.003*
	7-10-61	10-15-61	0.09	0.36	3.7	17.5	.01*	.009*	.1	.0001*	.01*	.003*	.006*	.03*	.01*	.009	.006*	.01*	.009	.006*	.02	1.0*	.006*
at Huntington, W. Va.	3-1-61	6-20-61	0.06	0.26	2.2	7.5	.01*	.005*	.05	.00008*	.008*	.002*	.003*	.02*	.1	.08	.005	.008*	.003*	.003*	.006	.8*	.003*
	7-10-61	10-15-61	0.08	0.44	3.7	22.5	.01*	.01*	.2	.0002*	.02*	.003*	.007*	.03*	.01*	.007	.007*	.02*	.007*	.007*	.02	2.0*	.007*
at East Liverpool, Ohio	3-1-61	6-20-61	0.04	0.18	2.2	7.0	.01*	.005*	.05	.00008*	.008*	.002*	.003*	.02*	.009	.06	.005	.008*	.003*	.003*	.002	.8*	.003*
	7-10-61	10-15-61	0.17	0.53	4.6	21.5	.01*	.01*	.007*	.0002*	.02*	.01	.007*	.03*	.01*	.01	.007*	.02*	.007	.007*	.001*	2.0*	.007*
OUACHITA RIVER																							
at Bastrop, Louisiana	7-10-61	10-15-61	0.09	0.06	2.7	59.5	.01*	.009*	.2	.0001*	.01*	.003*	.006*	.03*	.01*	.1	.009	.01*	.006*	.006*	.03	1.0*	.006*
PLATTE RIVER																							
above Plattsmouth, Nebraska	7-10-61	10-15-61	0.15	0.36	8.5	81.5	.01*	.01*	.3	.0002*	.02*	.004*	.009*	.04*	.02*	.2	.009*	.02*	.01	.03	.009	2.0*	.009*
POTOMAC RIVER																							
at Great Falls, Maryland	3-1-61	6-20-61	0.04	0.24	1.6	2.8	.01*	.003*	.04	.00005*	.005*	.001*	.002*	.01*	.004*	.03	.002*	.005*	.002*	.002*	.004	.5*	.002*
	7-10-61	10-15-61	0.03	0.26	3.4	8.5	.01*	.008*	.02	.0001*	.01*	.003*	.006*	.03*	.01*	.03	.006*	.01*	.006*	.006*	.002	1.0*	.006*
at Williamsport, Maryland	3-1-61	6-20-61	0.09	0.24	1.3	2.3	.01*	.003*	.02	.00005*	.005*	.001*	.002*	.01*	.004	.03	.002	.005*	.002*	.002*	.001	.4*	.002*
	7-10-61	10-15-61	0.08	0.28	2.5	11.0	.01*	.006*	.06	.0001*	.01*	.002*	.004*	.02*	.008*	.006	.004*	.01*	.004*	.004*	.004	1.0*	.004*
RED RIVER (North)																							
at Grand Forks, North Dakota	3-1-61	6-20-61	0.08	0.39	5.7	33.0	.01*	.01*	.01	.0002	.02*	.004*	.007	.04*	.01*	.07	.007*	.02*	.007*	.007*	.001*	2.0*	.007*
	7-10-61	10-15-61	0.13	0.38	5.7	47.5	.01*	.01*	.02	.0002*	.02*	.004*	.008*	.04*	.02*	.02	.008*	.02*	.01	.008*	.001*	2.0*	.008*
RED RIVER (South)																							
at Alexandria, Louisiana	3-1-61	6-20-61	0.21	0.24	2.2	26.0	.01*	.007	.02	.0001*	.01*	.002*	.005*	.02*	.009*	.009	.005*	.01*	.007	.005*	.002*	1.0*	.005*
	7-10-61	10-15-61	0.10	0.30	3.3	60.0	.01*	.01*	.2	.0002*	.056	.004*	.01	.04*	.01*	.04	.008	.02*	.008*	.008*	.004	2.0*	.008*
at Index, Arkansas	3-1-61	6-20-61	0.02	0.39	3.0	75.0	.01*	.02*	.05	.0003*	.03*	.005*	.01*	.05*	.02*	.04	.01*	.03*	.01*	.01*	.002*	3.0*	.01*
	7-10-61	10-15-61	0.12	0.36	4.5	149.0	.01*	.02*	.2	.0004*	.04*	.008*	.02*	.08*	.03*	.02	.02*	.04*	.02*	.02*	.006	4.0*	.02*
at Denison, Texas	3-1-61	6-20-61	0.09	0.62	5.5	130.0	.01*	.04*	.05	.0007*	.007*	.01*	.03*	.10*	.05*	.03*	.03*	.07*	.03*	.03*	.004*	7.0*	.03*
	7-10-61	10-15-61	0.18	0.46	5.7	330.0	.01*	.04*	.4	.0007*	.07*	.01*	.03*	.1*	.05*	.3	.03*	.07*	.03	.03*	.05	7.0*	.03*
RIO GRANDE																							
at Brownsville, Texas	3-1-61	6-20-61	0.34	0.87	5.0	125.0	.01*	.02*	.07	.0004*	.04*	.007*	.01*	.07*	.03*	.02	.01*	.04*	.02	.01*	.002*	4.0*	.01*
	7-10-61	10-15-61	0.29	0.73	5.0	116.0	.01*	.02*	.1	.0003*	.03*	.006*	.01*	.06*	.02*	.02	.01*	.03*	.02	.01*	.002*	3.0*	.01*
at Laredo, Texas	3-1-61	6-20-61	0.22	0.90	4.2	91.0	.01*	.02*	.04	.0003*	.03*	.006*	.01*	.06*	.03*	.06	.06	.03*	.01*	.01*	.1	3.0*	.01*
	7-10-61	10-15-61	0.18	0.95	4.5	84.0	.01*	.02*	.1	.0003*	.03*	.02	.01*	.05*	.02*	.1	.01	.03*	.03	.01*	.003	3.0*	.01*
at El Paso, Texas	3-1-61	6-20-61	0.24	0.93	7.5	150.0	.01*	.03*	.04	.0004*	.04*	.009*	.02*	.09*	.04*	.02	.02*	.05*	.02*	.02*	.003*	4.0*	.02*
	7-10-61	10-15-61	0.44	0.70	10.8	318.0	.01*	.01*	.01	.0002*	.02*	.004*	.008*	.04*	.02*	.008*	.008*	.02*	.02	.008*	.001*	2.0*	.008*
below Alamosa, Colorado	3-1-61	6-20-61	0.06	0.48	4.4	25.0	.01*	.008*	.01	.0001*	.01*	.003*	.005*	.03*	.01*	.008*	.005*	.01*	.005*	.005*	.0008	1.0*	.005*
	7-10-61	10-15-61	0.08	0.65	5.7	41.0	.01*	.01*	.07	.0002*	.02*	.003*	.07*	.03*	.01*	.03	.007*	.02*	.01	.007*	.007	2.0*	.007*

* ACTUAL VALUE IS LESS THAN THE AMOUNT SHOWN. REPORTED RESULT INDICATES LIMIT OF SENSITIVITY AT WHICH TEST WAS PERFORMED. SEE TEXT FOR EXPLANATION.

TRACE ELEMENTS

NATIONAL WATER QUALITY NETWORK

1960 - 1961

STATION	DATE		CONCENTRATION — MILLIGRAMS PER LITER																					
			ANALYSIS BY WET OR FLAME METHOD					ANALYSIS BY SPECTROPHOTOGRAPHIC METHOD																
	FROM	TO	B	F	K	Na	Se	Cd	Ba	Be	Pb	Cr	Sn	Sb	Mn	Fe	Ni	Bi	Mo	V	Cu	Zn	Co
ROANOKE RIVER																								
at John H. Kerr Reservoir and Dam, Virginia	7-10-61	10-15-61	0.08	0.05	2.3	7.0	.01*	.02*	.1	.0003*	.03*	.006*	.01*	.06*	.04*	.02	.01	.03*	.01*	.01*	.006	3.0*	.01*
SABINE RIVER																								
near Ruliff, Texas	3-1-61	6-20-61	0.04	0.13	1.6	9.0	.01*	.003*	.02	.00005*	.007	.0009*	.002*	.009*	.07	.9	.04	.005*	.002*	.002*	.03	5.0*	.002*
	7-10-61	10-15-61	0.05	0.11	2.3	16.5	.01*	.003*	.03	.00005*	.005*	.001*	.002*	.01*	.007	.2	.003	.005*	.002*	.002*	.005	.5*	.002*
SAN JUAN RIVER																								
at Shiprock, New Mexico	7-10-61	10-15-61	0.10	0.51	3.5	63.5	.01*	.006*	.1	.0001*	.01*	.002*	.004*	.02*	.009*	.04	.004*	.01*	.009	.004*	.009	1.0*	.004*
SAVANNAH RIVER																								
at Port Wentworth, Georgia	3-1-61	6-20-61	0.01	0.18	1.3	5.0	.01*	.002*	.01	.00003*	.003*	.001	.001*	.006*	.002	.4	.006	.003*	.001*	.001*	.005	0.3*	.001*
	7-10-61	10-15-61	0.02	0.16	1.8	5.5	.01*	.003*	.03	.00005*	.005*	.005	.002*	.01*	.003*	.15	.006	.005*	.003*	.002*	.005	0.5*	.002*
at North Augusta, South Carolina	3-1-61	6-20-61	0.02	0.13	1.2	4.0	.01*	.002*	.01	.00003*	.003*	.0006*	.001*	.006*	.005	.5	.003	.003*	.001*	.001*	.05	0.3*	.01*
	7-10-61	10-15-61	0.01	0.14	1.9	4.0	.01*	.002*	.01	.00003*	.003*	.002	.004	.006*	.002*	.4	.002	.003*	.001	.001*	.05	0.3*	.001*
SCHUYLKILL RIVER																								
at Philadelphia, Pa.	3-1-61	6-20-61	0.01	0.13	1.9	6.0	.01*	.005*	.06	.00008*	.008*	.002*	.003*	.02*	.006*	.005	.006	.008*	.003*	.003*	.005	0.8*	.003*
	7-10-61	10-15-61	0.22	0.28	3.8	16.5	.01*	.003*	.03	.00005*	.005*	.0009*	.002*	.009*	.004*	.005	.008	.005*	.002	.002*	.007	0.5*	.002*
SHENANDOAH RIVER																								
at Berryville, Virginia	7-10-61	10-15-61	0.12	0.26	3.3	19.0	.01*	.007*	.02	.0001*	.01*	.002*	.004*	.02*	.009*	.02	.004*	.01*	.004*	.004*	.004	1.0*	.004*
SNAKE RIVER																								
at Weiser, Idaho	7-10-61	10-15-61						.01*	.01	.0002*	.02*	.003*	.006*	.03*	.01*	.01	.007*	.02*	.01	.007	.001*	2.0*	.007*
at Wawawai, Washington	3-1-61	6-20-61	0.03	0.52	2.3	10.0	.01*	.003*	.08	.00006*	.006*	.001*	.002*	.01*	.005*	.02	.002*	.006*	.005	.005	.003	0.6*	.002*
	7-10-61	10-15-61	0.15	0.54	3.9	29.0	.01*	.007*	.04	.0001*	.01*	.002*	.004*	.02*	.009*	.01	.004*	.01*	.009	.007	.002	1.0*	.004*
SOUTH PLATTE RIVER																								
at Julesburg, Colorado	7-10-61	10-15-61	0.23	0.60	14.0	169.0	.01*	.04*	.03	.0006*	.06*	.04	.03*	.10*	.05*	.1	.03*	.06*	.03	.03*	.004*	6.0*	.03*
SUSQUEHANNA RIVER																								
at Conowingo, Maryland	3-1-61	6-20-61	0.03	0.13	1.3	2.8	.01*	.002*	.02	.00004*	.004*	.0008*	.002*	.008*	.003*	.02	.002*	.004*	.002*	.002*	.002	0.4*	.002*
	7-10-61	10-15-61	0.09	0.18	2.7	10.0	.01*	.005	.07	.00008*	.008*	.002*	.1	.02*	.007*	.02	.003*	.008*	.01	.003*	.005	0.8*	.003*
at Sayre, Pennsylvania	3-1-61	6-20-61	0.01	0.24	1.0	2.8	.01*	.002*	.02	.00003*	.003*	.0007*	.001*	.007*	.006	.05	.002	.003*	.001*	.001*	.007	0.3*	.001*
	7-10-61	10-15-61	0.09	0.02	2.3	9.5	.01*	.004*	.01	.00007*	.007*	.01	.003*	.01*	.006*	.007	.003	.007*	.003	.003*	.006	0.7*	.003*
TENNESSEE RIVER																								
at Bridgeport, Alabama	3-1-61	6-20-61	0.13	0.19	1.3	4.0	.01*	.002*	.02	.00004*	.004*	.0008*	.002*	.008*	.003*	.03	.004*	.004*	.002*	.002*	.005	0.4*	.002*
	7-10-61	10-15-61						.003*	.009	.00005*	.005*	.0009*	.002	.009*	.004*	.003	.002*	.005*	.002	.002*	.0009	0.5*	.002*
at Chattanooga, Tennessee	3-1-61	6-20-61	0.02	0.24	1.2	4.0	.01*	.002*	.02	.00004*	.004*	.0008*	.002*	.008*	.003*	.03	.002*	.004*	.002*	.002*	.002	0.4*	.002*
	7-10-61	10-15-61	0.10	0.14	1.8	10.0	.01*	.004*	.03	.00007*	.007*	.006	.003*	.01*	.006*	.01	.003*	.007*	.003*	.003*	.003	0.7*	.003*
TRUCKEE RIVER																								
at Farad, California	7-10-61	10-15-61	0.1	0.20	2.3	8.0	.01*																
YAKIMA RIVER																								
at Richland, Washington	3-1-61	6-20-61	0.22	0.33	1.6	5.0	.01*	.003*	.006	.00005*	.005*	.001*	.002*	.01*	.004*	.01	.002*	.005*	.003	.002	.002	0.5*	.002*
	7-10-61	10-15-61	0.09	0.26	5.0	25.0	.01*	.006*	.02	.0001*	.01*	.002*	.004*	.02*	.008*	.01	.004*	.01*	.008	.01	.004	1.0*	.004*
YELLOWSTONE RIVER																								
near Sidney, Montana	3-1-61	6-20-61	0.03	0.77	4.6	78.0	.01*	.02*	.01*	.0003*	.03*	.007*	.01*	.07*	.03*	.01	.01*	.03*	.01*	.01*	.002*	3.0*	.01*
	7-10-61	10-15-61	0.09	0.65	5.5	105.0	.01*	.02*	.06	.0003*	.03*	.006*	.01*	.06*	.02*	.2	.01*	.03*	.02	.01*	.006	3.0*	.01*

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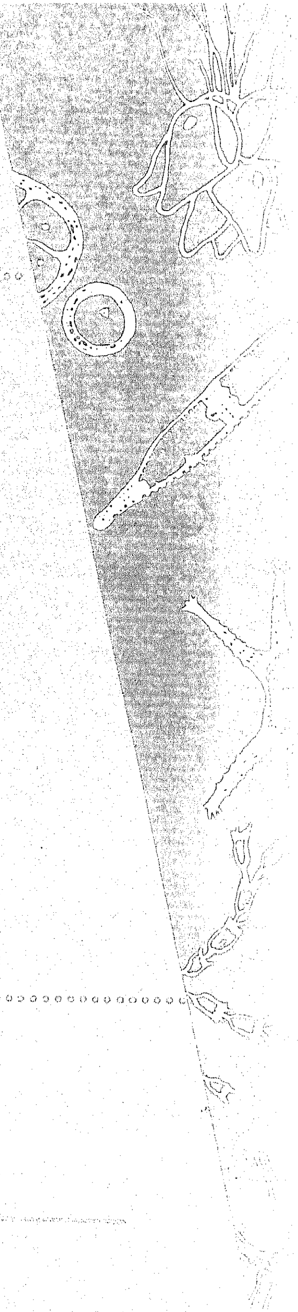
National Water Quality Network



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